H. CRAIG MELCHERT

# Studies in
# Hittite Historical Phonology

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TO MY MOTHER AND FATHER

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# Foreword

The two studies which follow deal with closely related aspects of Hittite phonology and in many cases with the very same data. It is therefore natural that they be presented together here. For the sake of consistency, I have tried to apply the results of each study throughout both. This means that in a few cases a new reading or interpretation appears in advance of the arguments justifying it. The reader may find the argumentation in such cases by use of the combined Hittite word index. Since each study is thoroughly cross-referenced internally, I have kept cross-references between the two to a minimum. A convenient summary of the principal diachronic developments proposed is found in the respective conclusions.

While the material discussed in both studies is similar, the nature of the problems treated differs. In the case of *w and *y I have attempted to summarize in systematic fashion our knowledge of their reflexes in Hittite. While some new analyses are presented (notably for postconsonantal glides), for the most part I have reviewed and tested prior work of others against the total material now available (which in some cases far exceeds that on which the proposals were first based). As always, some questions remain, but the fact that we are dealing with a well-studied topic means that many conclusions can be stated with confidence.

The status of e and i in Hittite is much more problematic. What is presented here is therefore necessarily not a comprehensive synthesis, but rather a first attempt to sort out the relationship between these two vowels both synchronically and diachronically. This step has been made possible by recent advances in establishing the relative chronology of Hittite texts and manuscripts. By restricting the study to those portions of the Hittite corpus over whose dating we have some control, I have been able to show that the relationship of e and i is basically consistent throughout Hittite. However, the necessary severe restriction of the corpus has also had the inevitable unhappy result of eliminating certain relevant lexical items from consideration and of reducing the examples of some phenomena to a mere handful. For these and other reasons the results presented here for e and i are less assured than those for *w and *y.

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# Reflexes of PIE *w and *y in Hittite*

## 1.0 Introduction

Previous comprehensive treatments of PIE *w and *y in Hittite are now more than a quarter-century old. The most complete discussion is that of Sturtevant, *CGr*[1] (1933) 99 ff and 111 ff. A much briefer survey is found in Sturtevant-Hahn, *CGr*[2] (1951) 36 ff, and in Kronasser, *VLFH* (1956) 44–46 and 49. Many of the conclusions presented in these works have proven to be valid, but a number of the etymologies on which they are based are no longer acceptable. Furthermore, some important modifications have been proposed. Several scholars have independently concluded that PIE initial *y disappears in Hittite before *e: see Hoffner, *Ancient Near Eastern Studies in Memory of J. J. Finkelstein* (1977) 107, Oettinger, *Die Stammbildung des hethitischen Verbums* (1979) 350, note 188, and implicitly already Laroche, *RHA* 53 (1951) 68, followed by others.[1] Oettinger, *Stammbild.* 338, also suggests that PIE *y is deleted generally between vowels, not just between like vowels, as previously thought.

These more recent claims are based on a small number of forms, and their overall implications have not been fully tested. The aim of the present study is a comprehensive review of the evidence for PIE *w and *y in Hittite and a systematic account of their reflexes. The facts for *w and *y will be presented in parallel fashion, according to their

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\* Abbreviations of older Hittitological works are those of Friedrich-Kammenhuber, *Hethitisches Wörterbuch,* 2te Auflage, Heidelberg: 1975 ff. In order not to burden the critical apparatus unduly, I have omitted references to etymologies found in such standard works as Pedersen, *Hitt.,* Friedrich, *HW,* Pokorny, *IEW,* Oettinger, *Stammbild.,* and Tischler, *Hethitisches Etymologisches Glossar* (1977 ff), unless some special comment is required.

Hittite words are normally presented in the traditional 'broad' transcription. I emphasize that the macron in such transcriptions indicates merely the redundant use of vowel sign: *ēšzi* = *e-eš-zi, wāši* = *wa-a-ši, iēzzi* = *i-e-ez-zi,* etc. Such spellings may or may not mark phonemic vowel length. Where necessary, phonological interpretations of the transcriptions are given in slant bars / /, where the digraph *ts* indicates a voiceless dental affricate.

[1] The possibility of a change *ye- > e-* is already raised by Pedersen, *Hitt.* 171, but this suggestion has only recently been followed up by others.

position in the word: 1. word-initial, 2. intervocalic, 3. postconsonantal and prevocalic, 4. postvocalic and preconsonantal (long and short diphthongs).

## 1.1 Initial *w

Initial *w is generally preserved in Hittite. Examples are attested before *ĕ, *ē, *o, *a and probably *i. Initial sequences of *w plus syllabic sonant appear as uR, with the same treatment after a word-boundary as after a consonant: see further 3.1.3.

### 1.1.1 Initial *wĕ

Examples: wētt-/wītt- 'year' < *wet-; wēš 'we' < *weyes or *weis; wešš- 'wear' < *wes-; wed-/wid- 'water' < *wed-; weriya- 'call upon' < *werh₁-ye/o-; wēštara- 'herdsman' < *westor-;[2] weši- 'pasture' < *wes- or *weis-;[3] wen- 'futuere' < *wen-;[4] wēzz-/wizz-/wiwida- 'strike; urge' < *wedh-;[5] werit(e)- 'be afraid' < *wer-;[6] waršanzi 'they harvest, pluck' < *wérsn̥ti.[7]

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[2] Since the oft-cited cognate Av. vāstar- has a consistent long vowel, Hitt. wēštara-could also represent a lengthened grade and belong under 1.1.2.

[3] Eichner, MSS 31 (1973) 79, derives weši- 'pasture' from the root *weis- 'flourish' (cf. Lat. uireō, uiridis), instead of from *wes- 'feast, feed'. This is supported by the attested inflection of weši- which shows three examples of the 'proterokinetic' adjectival inflection (wešai, wešaeš, wešauš) beside two of the 'acrostatic' nominal inflection wešiyaz, wešit). Out of more than 650 examples of i-stem nouns which I have collected, only weši-shows any adjectival inflection. This strongly points to its originally being an epithet: 'the green/flourishing (one)' or the like.

[4] Oettinger, Stammbild. 121, derives wen- 'futuere' from PIE *wenh_x- 'strive for' > 'desire' > 'be satisfied' (likewise Friedrich, HW 252, and Pokorny, IEW 1146–47). However, the context of the iterative uwanšikiwen in KBo III 60 III 13 suggests 'rape', if not a more general act of violence such as 'ravage'. Furthermore, the Hittite word wenal (Friedrich, HW 3. Erg. 36) appears to mean 'stick, staff' and is probably an instrumental noun to wen-, whose basic meaning would be 'strike'. The Hittite verb would then belong not to PIE *wenh_x-, but to *wen- 'strike' seen in Goth. wunds 'wounded', MWelsh gweint 'I pierced', etc. Derivation of the verb for sexual intercourse from a verb of violent action is commonplace. Cf. Lith. pìsti 'futuere' from *peis-, the root of OCS pichati 'strike' and Lat. pīnsere 'crush'. The semantic bridge to the latter is shown by Lat. pistillum 'pestle' and that to pìsti by MHG fisel 'penis'.

[5] Melchert, KZ 93 (1979) 265 ff. For the reasons cited there, Hittite wēzzai may indirectly continue a lengthened-grade *wēdh-ti, so this example may belong under 1.1.2.

[6] Friedrich, HW 252, Oettinger, Stammbild. 127. Only the root etymology is assured. Explanations of the stem formation differ. Oettinger's derivation from a univerbation of

## 1.1.2 Initial $*w\bar{e}$

Examples: $w\bar{e}\dot{h}$- 'turn' < $*w\bar{e}h_2$- (beside $wa\dot{h}(\dot{h})$-; see below 1.1.4);[8] $w\bar{e}k$- 'ask for' < $*w\bar{e}\hat{k}$-.[9]

## 1.1.3 Initial $*wo$

Examples: $wa\check{s}\check{s}e$-/$wa\check{s}\check{s}a$- 'clothe' < $*wos\acute{e}ye/o$-;[10] $w\bar{a}\check{s}i$ 'buys' < $*w\acute{o}sei$;[11] $war\check{s}i$ 'plucks, harvests' < $*w\acute{o}rsei$;[7] $warpa$- 'enclosure' < $*worPo$-;[12] $wa\check{s}pa$- 'garment, shroud' < $*wospo$- or $*wospeh_2$-.[13]

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$*weri$ $dheh_1$- 'zur Verehrung setzen' does account for the single -$t$- and the attested inflection $weritezzi$, $weritanzi$.

[7] The root etymology is in Friedrich, *HW* 248 (following Benveniste). For the 'acrostatic' paradigm $*w\acute{o}rsei$, $*w\acute{e}rs\d{n}ti$ see Jasanoff, *Hethitisch und Indogermanisch* (1979) 79 ff.

If Hitt. $warr(a)$- 'help' is directly cognate with Grk. $\^{e}ra$ 'help' (Gusmani, *SMEA* 6 (1968) 17 ff, followed by Schindler, *BSL* 67 (1972) 37, and Watkins, *MSS* 33 (1975) 97 ff), then it would represent $*werh_x$-. For the phonology compare $tarra$- 'be able' < $*t\acute{e}rh_2$-$o$- and see note 91. On the other hand, one could also assume an $a$-stem $warra$- cognate with Luv. $*warra\dot{h}$- seen in the adjective $warra\dot{h}ita\check{s}\check{s}a$- 'of helpfulness' (for the Hitt. $a$-stem cf. $\dot{h}a\check{s}\check{s}a$- 'hearth' < $*h_2eh_xseh_2$ = Lat. $\bar{a}ra$). This opens the possibility not only for $*werh_xeh_2$- but also for an $o$-grade $*worh_xeh_2$ of the type of Grk. $tom\acute{e}$, Lat. $toga$, etc. See also 1.1.6.

[8] On this derivation see Oettinger, *Stammbild.* 99 ff. The long $*\bar{e}$ is reflected both in the sequence -$e\dot{h}$- (short $*\check{e}$ becomes $a$ before $*h_2$) and by the lenition of -$\dot{h}\dot{h}$- (the regular reflex of $*h_2$) to single -$\dot{h}$-. A derivation from $*weih_2$- (Eichner, *MSS* 31.76–77) cannot explain the plural stem $wa\dot{h}(\dot{h})$-. See 1.1.4.

[9] For the frequent single -$k$- (against Sturtevant's Law) see Oettinger, *Stammbild.* 100, following Eichner, *MSS* 31.81.

[10] Friedrich, *HW* 248, gives the root etymology. For the specific derivation from an $o$-grade causative see Eichner, *MSS* 27 (1969) 31 ff, and the detailed discussion below in 2.2.1.

[11] For the $o$-grade here see Jasanoff, loc. cit.

[12] See Excursus I.

[13] Watkins, *Lg* 45 (1969) 241. Initial $*wo$- is also undoubtedly attested in the hapax $w\bar{a}rai$ (*KUB* XVII 27 II 26) 'sets fire to'. The 'thematic' $\dot{h}i$-form $w\bar{a}rai$ stands for an original $*w\bar{a}ri$ < $*w\acute{o}rei$ like $wa\check{s}tai$ 'sins' for older $wa\check{s}ti$): cf. note 7. The causative $warnu$- 'burn' may be built on the transitive $\dot{h}i$-verb $war$- (an old $*w\d{r}$-$n\acute{e}u$- would have led to $*urnu$-: see 1.1.6). The stem $war$- also spreads to the intransitive middle, which is $ur\bar{a}ni$ 'burns' in Old Hittite < $*ur$-$\acute{o}$-$ri$, later $war\bar{a}ni$. For the relationship $ur\bar{a}ni$: $*w\bar{a}ri$: $war$-$nuzzi$ (int.: tr.: caus.) compare $lag\bar{a}ri$ 'bends, inclines' (int.): $l\bar{a}ki$ 'bends' (tr.): $laknuzzi$ 'causes to bend'. The verb $l\bar{a}ki$, attested in OH, is replaced by $laknu$- in Middle and Neo-Hittite. The rarity of $*w\bar{a}ri$ ($w\bar{a}rai$) reflects an earlier similar replacement by $warnu$-.

Hitt. $warkant$- 'fat' probably represents either a causative participle $*worh_x\hat{g}\acute{e}yont$- 'fattened' (Eichner, *MSS* 31.76) or a Hittite extension in -$ant$- of an $o$-stem adjective $*worh_x\hat{g}o$- (suggestion of J. Schindler).

## 1.1.4 Initial *$wa$

Examples: $w\bar{a}k$-/$wakk$- 'bite' < *$wag$-;[14] $wakk$- 'fail, be lacking' < *$wak$-;[15] $wah(h)$- 'turn' < *$weh_2$- (already in PIE phonetically undoubtedly *$wah$-).[16]

## 1.1.5 Initial *$wi$

There are two likely examples, although neither is absolutely assured: $wiyana$- 'wine'[17] and $wid\bar{a}(i)$- 'bring' < *$wi$-$dhh_1$-$eh_2$-$ye$/$o$-.[18]

## 1.1.6 Initial *$w\mathring{R}$

Initial *$w\mathring{R}$ appears in Hittite as $uR$, which is the postconsonantal treatment (see 3.1.3). Examples: $urki$- 'trail, track' < *$w\mathring{r}gi$-;[19] $\bar{u}rr$- 'help' < *$w\mathring{r}h_x$-;[20] probably also $u\check{s}tul$- 'sin' < *$w\mathring{m}s$- beside $wa\check{s}tul$- < *$wems$-.[21]

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[14] Kammenhuber, KZ 77 (1963) 47, and others. The -$kk$- of the third plural $wakkanzi$ is secondary, as shown by the consistent single -$k$- of the derivatives $wage\check{s}\check{s}ar$ and $wagata$- (sic!), pace Oettinger, Stammbild. 446, note 113. One could also assume *$weh_2g$-, but evidence for *$\bar{a}$ in this root is weak (Pokorny, IEW 1110).

[15] Compare Lat. $uac\bar{o}$ 'be empty' (Laroche, BSL 58 (1963) 62 ff, and others). Again, support for a *$weh_2k$- is dubious: see Pokorny, IEW 345.

[16] See Oettinger, Stammbild. 99, and compare note 8.

[17] Hitt. $wiyana$-, HLuv. $wi(y)ana$- and CLuv. $winiyant$- all point to a Common Anatolian *$wiyana$- (the last with syncope of $iya$ to $i$ (3.2.2), the usual transfer to the $i$-stems, and addition of the common -$ant$- suffix). CAnat. *$wiyana$- cannot represent *$woino$-, which would have yielded *$wena$- (4.2.1). Umbrian and Faliscan $uinu$ beside Lat. $u\bar{\i}num$ point to a Common Italic *$w\bar{\i}num$: see Meillet-Ernout, Dict. étym. sub $u\bar{\i}num$. Whether or not one reconstructs the Italic form as *$wih_xno$- and assumes a PIE inheritance, the Italic reflexes support the Anatolian evidence for a variant with initial *$w\breve{\i}$ beside the *$woino$- of Greek and the *$wain$- of Semitic.

[18] See Excursus II.

[19] Eichner, MSS 31 (1973) 73, who compares Skt. $vraj$- 'goes, wanders' (following Duchèsne-Guillemin).

[20] The verb is attested only in the pret. 3rd pl. $\bar{u}rrir$, which leaves several possibilities for the inflectional type. The assignment to the thematic $\hbar i$-conjugation by Oettinger, Stammbild. 504, is based on his false interpretation of the OH form $uwarra$ in the phrase $uwarra$ $\hbar alzais$ (KUB XXXI 4 Vs 3) as an imv. 2nd sg.: 'He called: "Help!"'. The interpretation as an imperative is certainly false. A preposed direct quote is to my knowledge unparalleled, and the following context (which is direct speech) uses only second plural (!) imperatives. The form $uwarra$ is the directive (allative) of $warr(a)$- 'help', and the phrase means 'called for help'. There is no justification at all for doubting the authenticity of the noun $warr(a)$-, on which see note 7.

[21] For the root etymology see Oettinger, Stammbild. 504, who compares the family of OIce. $vamm$ 'fault, defect'.

The alternation $walki\check{s}\check{s}arah\hbar$-/$ulki\check{s}\check{s}arah\hbar$- 'perfect, train well' may reflect a similar case with initial *$we$/$ol$- beside *$w\mathring{l}$-, but the etymology remains obscure.

## 1.1.7 Orthography of initial *w*

Since it will be relevant to the discussion below of initial *y*, I must add here a few remarks on the orthography of initial *w* in Hittite. The cuneiform syllabary as used by the Hittites has no separate sign for /we/, so this initial sequence must be spelled as *ú-e-*. Likewise, since the use of the GEŠTIN sign for /wi/ is a very late secondary development, initial /wi/ is also normally spelled *ú-i-*.[22] There is a separate sign for /wa-/, so this initial sequence can be and usually is spelled simply *wa-*. However, there are also several instances of initial *ú-wa-* or *u-wa-* for /wa-/: *ú-wa-a-i-in* for /wain/ (*KBo* XVII 7 + IV 7 beside *wa-a-*° ibid. IV 9), *ú-wa-aḫ-nu-wa-ar* for /wahnuwar/ (horse-training texts passim), *u-wa-al-aḫ-* for /walh-/ (*KBo* XVI 50 Vs 10.15.20), *ú-wa-an-ti-wa-an-ta-az* for /wantiwantats/ (*KUB* XVII 10 II 33), *ú-wa-ar-ra* for /warra/ (*KUB* XXXI 4 Vs 3), *ú-wa-ar-ka-an-ta-an* for /wargantan/ (*KBo* III 60 II 3), *ú-wa-ar-ša-ma-an* for /warsman/ (*KUB* XXXII 129 IV 3 beside *wa-ar-*° ibid. IV 4), *ú-wa-aš-ta-i* for /wastai/ (*KBo* III 28 II 10), *ú-wa-a-tar* for /wadar/ (*KBo* III 34 II 35), *ú-wa-an-ši-ki/a-* for /wanske/a-/ (*KBo* III 60 III 3 and *KUB* XXXI 64 I 7). Similarly, one manuscript, *KUB* XIII 3 II 22.26 etc. consistently spells initial /wi-/ as *ú-wi-*.

The motivation for these spellings is probably twofold. First, the sign *wa* is also used in the Akkadian syllabary for /pi/ and /pe/. Therefore the use of a preceding *u* or *ú* sign would make it clear that the following sign was to be read as /wa/.[23] More immediately, the fact that other sequences of initial *w* plus vowel were written with *ú-* would tend to lead to the redundant use of *ú* or *u* before *wa* as well. Compare the redundant spelling *-u-wa-* for intervocalic *-w-* below in 2.1.6.

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The development of intial *ẉR-* to *uR-* argues against the otherwise plausible derivation by Oettinger, *Stammbild.* 549, of *warḫui-* 'shaggy, rough' from *$*wṛh_2w$-íh₂*. Examples like Lat. *suāuis* and *leuis* suggest that *e*-grade is also possible in such forms, and Hitt. *war- points* to *$*werh_2w$-ih₂-*. For the root etymology of *warḫui-* see Neumann, *KZ* 75 (1958) 90, who compares Grk. *eîros* 'fleece'.

[22] While the signs *u* and *ú* are in general used interchangeably, this is not true of initial prevocalic position. My own files show more than 850 examples of initial /we/ spelled *ú-e-* and more than 250 of /wi-/ spelled *ú-i-*, along with four instances of /wi-/ spelled with the *wi* sign. There are no examples of initial *w* spelled with the *u* sign. On the contrast with initial /u-/ in *u(i)ya-* see note 31.

[23] See Pedersen, *Hitt.* 6–7. However, as he himself points out, since the values /pi/ and /pe/ of this sign do not actually occur in Hittite, this motivation for the preceding *u/ú* could not have been very strong.

## 1.2 Initial *y

Initial *y is preserved in Hittite before *o and *u. Since *o falls together with *a in Hittite, it may be safely assumed that *y was also preserved before *a, but I know of no examples. Initial *y was regularly lost in Hittite before *e (on its preservation in iēzzi 'makes' and iētta 'goes' see below).

### 1.2.1 Initial *ye

Evidence for the regular loss of initial PIE *y before *e comes chiefly from three words: ewa- 'barley' (or similar) < *yewo-;[24] ega- 'ice' < *yego-;[25] and ēkt- 'hunting net' < *yek-t-.[26] In addition, note the following examples of e- from *ye- in the paradigms of iēzzi 'makes' and iētta 'goes': e-et 'he made' (KUB XXXVI 41 I 5), e-en-zi 'they make' (Bo 2599, cited by Friedrich, HW 2. Erg. 13), en-ta-ri 'they go' (KUB XXXIII 52 II 12 and KUB XL 28, 1).[27]

Oettinger, Stammbild. 350, note 188, and 348, note 180, rejects the commonly accepted etymology of iēzzi/(i)yazzi 'makes' < *yéh₁-ti,[28] deriving it instead from a thematic *h₁éyeti (cf. Luv. a(ya)- 'make'). Hollifield, JIES 6 (1978) 177–178, likewise derives iēzzi from a thematic present *éyeti and also iētta 'goes' from a corresponding middle *eyeto(ri).[29] This explanation of Hittite iēzzi and iētta must be rejected for the following reasons.

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[24] Laroche, RHA 53 (1951) 68, and others. This word is originally a neuter a-stem in Hittite: nom.-acc. ewan, gen. ewaš. One also finds a secondary n-stem genitive ewanaš (KBo X 34 I 13.21). On the meaning see Hoffner, Alim. heth. 80–82, and on the meaning of the PIE word also Watkins, Proceedings of the American Philosophical Society 122/1 (1978) 9 ff.

[25] Hoffner JCS 24 (1971) 31–36. The word is an a-stem in Hittite, showing both neuter and animate forms (thus with Tischler, HEG 103, contra Hoffner, loc. cit.). It may be directly related to OIr. aig 'ice' and ON jaki 'ice floe' < *yegi-, The adjective ekuna- 'cold' is not compelling evidence for a labiovelar (likewise Tischler, after some hesitation).

[26] Hoffner, Studies ... Finkelstein 105 ff. On the root etymology and formation see Hamp, IF 83 (1978) 119, and Berman, ibid. 123. If their equation of Luvian aggati- 'snare, net' with ēkt- is correct, then the loss of initial *y before *e must be Common Luvo-Hittite. As indicated by Oettinger, Stammbild. 535, Anatolian *ĕ becomes Luvian a except after *y and velars, where it appears as i. Thus if the initial *y of *yek-t- had been preserved into Luvian, the word would have come out *iggati-. The change to aggati- shows that the word was already *ekt- when it entered Luvian.

[27] The latter example is partially broken but sure. The meaning is assured by the preceding preverb: [a]r-ḫa en-t[a]-r[i].

[28] See Tischler, HEG 341, for this and counterproposals.

[29] Oettinger, Stammbild. 348–349, treats iētta as a secondary thematic middle built on the weak athematic active stem of 'go' i-/ya-. His motivation of the change in diathesis

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First, the Old Hittite spellings of these words makes it clear that they are to be read as /yetsi/ and /yeta/, and the corresponding forms with *a*-vocalism likewise as /yatsi/ and /yata(ri)/. Note the following spellings and their chronological distribution: *ya-az-zi* 'makes' (*KUB* XXXVI 108 Vs 12; OH ms.), *ya-an-zi* 'they make' (*KUB* XXXVI 106 Vs 1; OH ms.), *i-an-zi* 'they make' (*KUB* XXVIII 97 II 8; OH ms. and *KBo* XXI 22 Rs 41; MH ms. of OH text); *ya-at-ta* 'goes' (*KUB* XXXVI 106 Vs 2; OH ms.) *i-at-ta-ri* (*KUB* XLIII 38 Rs 24; NH ms. of OH text); cf. also *ya-an-ni-iš* 'he marched' (*KBo* XXII 2 Rs 7; OH ms.). These spellings are clearly archaisms, and along with the few cases of initial *e-* given above, they make it certain that the spellings *i-e-* (frequent in Old Hittite) and *i-ya-* are to be read as /ye-/ and /ya-/.

The frequent spelling of initial /ya-/ as *i-ya-* may be accounted for along the same lines as the spelling of initial /wa-/ as *ú-wa-* or *u-wa-*. For further evidence of the equivalence of the initial spellings *i-ya-* and *ya-* (or *i-a-*) see the following: place names *Yaḫreṧṧa/Iyaḫreṧṧa, Yalanti/ Iyalanti*, divine names *Yarri/Iyarri* and *Yandu/Iyandu*, Luvian *(i)yaṧḫa-* and its derivatives, and finally *i-ya-u-wa* (*KUB* XXX 34 IV 32, XXXIX 104 IV 10)/*ya-u-wa-ar* (*KUB* XLIV 50 II 13), a word meaning something like 'exclamation'. For a further justification of *i-ya-* as /ya-/ see 1.2.4 below.

Second, the preforms *$\acute{e}yeti$, *$\acute{e}yonti$ and *$\acute{e}yeto(ri)$ *$\acute{e}yonto(ri)$ would not have produced Hitt. *iēzzi, iyanzi* and *iētta, iyanta(ri)*. As will be shown in detail below in 2.2, intervocalic *$y$ was lost in Hittite (as claimed by Oettinger himself, *Stammbild.* 338!). Thus *$\acute{e}yeti$, *$\acute{e}yonti$ would have become *$\bar{e}zzi$, *$anzi$ and likewise *$\acute{e}yeto(ri)$, *$\acute{e}yonto(ri)$ would appear as *$\bar{e}tta$, *$anta$. Furthermore, the forms of *u(i)ya-* 'send' cannot be explained from *$u$-eyeti, *$u$-eyonti. If the *$y$ had been preceded by an *$e$, the *$u$- would show up as initial *$w$- (*$\bar{w}ezzi$, *$wanzi$): cf. *wemiya-* 'find' < *$u$-em-ye/o-*.[30] In fact, however, *u(i)ya-* is spelled consistently with initial *u-* (vs. *ú*), leading Friedrich to read the *u-* cor-

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through the phonological merger of 'they go' *(i)yanzi* (<*$h_1y$-énti*) and 'they make' *(i)yanzi* (<*$h_1\acute{e}yonti$*) is ill-founded on two counts. First, even allowing his preform of 'they make', a merger of 'they go' and 'they make' would be possible only with the unstated (and entirely unwarranted) assumption of a prothetic vowel in 'they go' (which is actually attested in *KBo* XXII 2 Vs 7 (OH ms.) as *ya-an-zi* without initial *i-*). Furthermore, as Oettinger himself observes elsewhere, *Stammbild.* 305, the Hittites were not disturbed by the homophony of *ḫāši* 'opens' and 'gives birth' (nor for that matter by *dāi* 'takes' and 'places'), which as transitive verbs would give much more chance for confusion than *yanzi* 'they make' and 'they go'.

[30] Pedersen, *Hitt.* 82, following already Hrozný. For the appearance of the preverb *$au$- as *u-* here, see 2.2.3.

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rectly as syllabic /u-/.[31] The stem _u(i)ya-_ (/uya-/) can only be from a univerbation of _u-_ and a stem /ye-/ (resp. /ya-/). On the preservation of the intervocalic _-y-_ in this combination see 2.2.5 below.

The third argument against the derivation by Oettinger and Hollifield of _iēzzi_ < *_éyeti_ is that there are no sure examples of simple thematic verbs in Hittite. Of the examples cited by Oettinger, _Stammbild._ 261–314, _lukke-_ 'kindle' and _wašše-_ 'clothe' are from causatives in *_-éye-_ (details below in 2.2.1), while _šuwe-_ 'push' may be derived from *_suh₁-ye-_ with loss of intervocalic *_y_ (claimed by Oettinger himself for every other Hittite verb in _-uwe-_, _Stammbild._ 330 ff). Given the rampant productivity of deverbal _-ye-/-ya-_ in Hittite (verbs of virtually every inflectional type acquire a competing stem in _-ya-_), this explanation must be considered more likely than equation with Skt. _suváti_ from *_suh₁-éti_. The secondary nature of the Sanskrit _tudáti_ type is already well-known.[32]

The synchronically thematic verb _ḫulli-_ 'fight' is a back-formation from _walḫ-_ 'strike'. The original athematic paradigm of _walḫ-_ would have been *_h₂wélh₂-ti_, *_h₂wl̥h₂-énti_. By regular phonological developments this would have yielded Hittite _walḫzi, ḫullanzi._[33] This very irregular paradigm was then leveled after the singular as _walḫ-_ 'strike', while the form _ḫulla-_ was retained in the secondary meaning 'fight', and a new paradigm created after the model of _zinnizzi, zinnanzi_ 'finish' (note that both stems share the shape CVRRV-).

In the case of alleged _malle-_ 'grind', _išparre-_ 'lay flat' (< 'kick with the foot'), and _šarre-_ 'divide, share', Oettinger misinterprets (to some extent misrepresents) the relative chronology of the attested inflection

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[31] My files show 168 examples of _u(i)ya-_ with initial _u-_ versus only four with _ú-_. For the frequent spelling of /uya-/ as _u-i-ya-_ (beside rare _u-ya-_), compare _ḫu-i-ya-_ beside _ḫu-u-ya-_ 'run' which is the weak stem of _ḫuwāi-_ 'run' and must represent /huya-/ < *_h₂uh₁y-(énti)_. Oettinger, _Stammbild._ 480–481 gives a similar analysis of _ḫūya-_. The preservation of intervocalic *_y_ in /huya-/ is analogical after other verbs of this class: _išpāi: išp(i)yanzi: : ḫ(u)wāi: ḫuyanzi._ The phonologically regular result _ḫuwanzi_ < *_h₂uh₁y-énti_ is also attested. The consistent use of the _u_ sign in _u-i-ya-_ is doubtlessly conditioned by the following graphic _i_ (on which see further 2.2.6): a spelling _ú-i-ya-_ would suggest /wiya-/ (cf. note 22). On the other hand, before a sign with initial consonant, /u-/ may be spelled either _u_ or _ú_: e.g. _ú-da-_ or _u-da-_ for /uda-/.

[32] See Renou, _Mélanges Vendryes_ (1925) 309–316, and _BSL_ 33 (1932) 5–30, followed by Watkins, _Idg. Gram._ III/1.63.

[33] For the root etymology of _walḫ-_ as *_h₂welh₂-_ see Oettinger, _Stammbild._ 264, who also gives the gist of the phonological developments. A sequence *_-VRHV-_ in Hittite gives _-VRRV-_, thus *_h₂wl̥h₂- énti_ > *_ḫulḫanti_ (3.1.3) > _ḫullanzi._ In the singular, where the second laryngeal remained, the first was lost by dissimilation. Compare Hitt. _išḫi(ya)-_ 'binds' vs. CLuv. _ḫišḫiya-_ < *_h₂i-sh₂i-_.

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in Hittite. He lists the attested forms of *mall(e)-* in *Stammbild.*
277–278. The only assuredly Old Hittite form is the participle *mallan,*
which is derivable from several different inflectional types. The earliest
example of the pres. 3rd sg. *mallizzi* (read by Oettinger as /malletsi/) is
in a Neo-Hittite manuscript of a Middle Hittite text. It is also found in
Neo-Hittite alongside *malliyazzi, mallai* and *malli.* The last form is in a
Neo-Hittite copy of an Old Hittite text.[34] Also attested twice is the in-
finitive *malluwanzi.* The forms *malli* and *malluwanzi* taken together
point to the athematic *ḫi*-conjugation. These are difficult to explain as
neologisms, since this class is itself being replaced in Neo-Hittite by the
thematic *ḫi*-conjugation (note *mallai*). On the archaic status and histor-
ical replacement of this class see Oettinger himself, *Stammbild.* 399. On
the other hand, if one assumes that the athematic *ḫi*-conjugation of
*mall-* is original (see Jasanoff, *Hethitisch und Indogermanisch* (1979) 83–
84), then the late form *mallizzi* may be interpreted as /mallyetsi/ (be-
side *malliyazzi* and the ambiguous pret. 3rd sg. *malliet,* which may be
either /mallyet/ or /mallet/). Again we may be dealing with the ubiqui-
tous *ya*-stem class.[35]

The same considerations apply to the alleged *išpar(re)-* 'lay flat'. I
agree with Oettinger, *Stammbild.* 271, that this verb is best kept separate
from *išparnu-* 'strew' (< *$sp\underset{.}{r}néu$-* to **sper-*; cf. Grk. *spéirō,* etc.). The
meaning of *išpar-* is originally 'knock/lay flat' (with the foot) and the
verb is derived from the root *$sperh_1$-* seen in Skt. *sphuráti* 'kicks', etc.
Again, however, the pres. 3rd sg. form *išparrizzi* does not occur until
M. H. (see Oettinger, *Stammbild.* 266), and alongside other spellings
such as *išparriyezzi* and *išparriyazzi* may be read as /sparryetsi/. On the
other hand, the athematic *ḫi*-conjugation forms *išpāri, išparḫun* and *iš-*

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[34] Oettinger's assignment of verb forms to chronological periods is often highly mis-
leading. He lists NH copies of MH texts under MH (and uses them without further con-
sideration as evidence for 'the older language'), while some NH copies of OH texts are
listed under NH without mention. It is perfectly true that NH copies may contain neolo-
gisms and even linguistically unreal forms, but a NH copy of an OH text has at least as
much chance of preserving an archaism as a NH copy of a MH text! For *KUB* VII 1
(*CTH* 390) as an OH text see my dissertation (note 12 above), p. 76.

[35] I stress that third singular spellings in -*Ci-iz-zi* are ambiguous at all periods of Hit-
tite. E. g., in *KBo* VI 2, the OH manuscript of the Laws, Tablet I, verbs in -*(i)ye-* and syn-
chronically thematic verbs in -*e-* are both regularly spelled -*Ci-iz-zi*: *peššizzi, kuššanizzi,*
*šittarizzi, tūrizzi, wemizzi* and likewise *lukkizzi.* The same is true of the OH manuscript
of Tablet II (*KUB* XXIX 38 +): *tūrizzi; ḫullizzi, lukkizzi.* Only the morphological analy-
sis, based on other parts of the paradigm (*peš(i)yanzi, tūr(i)yanzi* vs. *ḫullanzi, lukkanzi*),
leads us to read the first set as /pessyetsi/, /duryetsi/, etc. and the second as /hullitsi/,
/luketsi/.

*pāru* cannot be explained from an original thematic *mi*-conjugation verb, for the same reasons given above for *malli* and *malluwanzi*. Oettinger in this case calls upon the analogical influence of the verb *išgar-* 'fix, plant', but this is hardly convincing. Oettinger, *Stammbild*. 416, correctly lists *išgar-* as an athematic *ḫi*-verb, but it too shows some forms which could be interpreted as thematic *mi*-conjugation: e.g. *išqarrit* which may be /iskarret/ as well as /iskarryet/. As with *mall-* 'grind', *išpar-* 'lay flat' may be easily explained as an original athematic *ḫi*-verb.

Oettinger's presentation of the alleged *šarre-* 'divide, share, transgress', *Stammbild*. 284 ff, is highly confused. In the first place, as he himself has shown with fine documentation, *StBoT* 22 (1976) 59 ff, the verb *šarra-* in the sense 'transgress' (an oath) is inflected exclusively in the middle in Old and Middle Hittite. Only later is the middle replaced by the active (the same replacement is seen in *ḫadda-* 'cut'). The Old Hittite form *šar-ri-it[ ]* in *KUB* XXXVI 106 Rs 5 occurs directly before a break. In view of its meaning 'transgress' one should read *šar-ri-it-[ta]* (for this beside *šarratta* and *šarrattat* compare *marritta* beside *marrattat*).[36] In *Stammbild*. 285 *šarrit* is listed as active pret. 3rd sg. with no indication of either its fragmentary status or its anomalous meaning! Oettinger's insistence, *Stammbild*. 286, that the two verbs *šarra-* 'transgress' and *šarr(e)-* 'divide, share' have the same inflection in the older language is false. The former shows exlusively middle inflection and, with the exception of *šarrit[ta]*, exclusively a thematic inflection.

On the other hand, the only assured OH form of *šarr(e)-* 'divide, share' is pres. 3rd pl. *šarranzi*, which once again is explainable from several inflectional types. However, a Neo-Hittite copy of an Old Hittite text has the infinitive *šarruwanzi*. Furthermore, *KUB* XXXV 4 III 7, also likely a copy of an Old Hittite text,[37] offers the form *šarri*, which is also attested in *Bo* 2583 III 3. Again we have evidence for an athematic *ḫi*-verb, which for reasons given above can hardly be secondary. Once more a close scrutiny of Oettinger's evidence for the thematic inflection in the older language shows that forms such as *šarrizzi* and *šaraweni* are in fact no earlier than Neo-Hittite copies of Middle-

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[36] The surrounding context of *KUB* XXXVI 106 Rs 5–7 in fact demands a present verb: *[... kēl t]uppiaš uttār šarrit[ta]/[n-an kē] linkiyanteš appantu [–]n-aš ḫaraktu* '[If he/ Whoever] transgresses the words of [this] tablet, let [these] oaths seize [him], and let him perish!'. For the restorations and the general condition with a present (!) tense of *šarra-*, compare the various parallels given by Oettinger, *StBoT* 22.59–60.

[37] Note the form *laparnaš* in III 16. With a single exception, the spelling with initial *l* is attested only in Old Hittite texts.

Hittite texts. Thus *šarrizzi* is interpretable as /sarryetsi/ (beside *šariy-azi*), and *šaraweni* may be a thematized *ḫi*-conjugation form (beside *šarrai*).

The ambiguity of spellings in *-Ci-iz-zi* leaves another possibility for late *mallizzi, išparrizzi* and *šarrizzi*. While they may well represent *ya*-stems, as indicated above, it may not be accidental that these all share the shape CVRRV- with *ḫulli-* and *zinni-*. It is therefore possible to interpret them too with Oettinger as thematic /mallitsi/, /sparritsi/ and /sarritsi/ (without accepting his claim that the thematic inflection is original).

Of Oettinger's remaining active thematic verbs only one has a clear formation: *papre-* 'be impure' is an *$-eh_1$- stative (Watkins, *TPS* (1973) 79f), pace Oettinger, *Stammbild.* 284, note 50). For further discussion see 2.2.1 with note 68. The verb *šulli-* 'quarrel' is not attested earlier than Middle Hittite. The stem forms *šulli-* and *šulla-* could point to a thematic inflection, but the presence of stems *šulliya-* and *šullāi-* again makes the interpretation of the former pair uncertain. Note once more the stem shape CVRRV-. The history of this verb is further troubled by interference from the family of *šulla-* 'hostage' (see Oettinger's discussion, *Stammbild.* 292).

Returning to our point of departure, then, we have seen that the derivation of *iēzzi* and *iētta* from *$*éyeti$ and *$*éyeto(ri)$ is false: the Old Hittite spellings point to initial /ye-/ and /ya-/; the suggested preforms would not give the attested Hittite forms (even if one interpreted them as /iye-/ and /iya-/); and the reconstruction of simple active thematic stems for Hittite is dubious.[38]

On the other hand, derivation of *iēzzi* /yetsi/ from *$*yéh_1-ti$ and of *iētta* /yeta/ from a thematic middle *$*h_1y-é-to$ is straightforward (for the latter reconstruction cf. Watkins, *Idg. Gram.* III/1 (1969) 199). As shown by the handful of spellings with initial *e-*, the loss of initial *$*y$ before *$*e$ was regular here too.

Normally, however, the initial *y-* was restored before *e* after the plural forms in *ya-*. The historical replacement of *ye-* by *ya-* in the singular of these verbs is of course entirely parallel to that in the derived verbs in *$*-ye-/-yo-$: see Carruba, *Kratylos* 7 (1961) 157ff, *ArOr* 33 (1965) 13f, and *Sprache* 12 (1966) 79f.[39]

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[38] That leaves Luv. *a(ya)-* as the only support for a thematic *$*(h_1)éye-$ 'do, make'. On this verb see Excursus III.

[39] See Excursus IV.

## 1.2.2 Initial *ya* (from *\*yo* etc.)

The clearest example is *(i)yanta(ri)* /yanta(ri)/ 'they go' from *\*h₁y-onto*. For the reading /yanta/ and the formation see the lengthy discussion immediately preceding. For the vocalism of the ending see among others Watkins, *Idg. Gram.* III/1. 174 ff, and Oettinger, *Stammbild.* 259.

Since PIE *\*en* becomes Hittite *an* before a dental stop (cf. Hittite *anda* < *\*endo,* etc.), an original athematic 3rd pl. ending *\*-enti* (cf. Doric *entí* 'they are' < *\*h₁s-énti*) would have become Hittite *\*-anti* > *-anzi* just like *\*-onti*. Therefore *yanzi* 'they go' (*KBo* XXII 2 Vs 7; OH ms.) may be either from *\*h₁y-énti* or *\*h₁y-ónti*, and likewise *yanzi* 'they make' from either *\*ih₁-énti* or *\*ih₁-ónti*.[40] The occasionally attested third plural form *ienzi* 'they make' in Old Hittite is analogical after the third singular *iēzzi* and does not represent directly PIE *\*ih₁-énti*. This is shown by the third plural *iēnta* 'they go' (after *iētta* 'goes'), which cannot be from a (non-existent) *\*h₁y-ento*. Similarly, the rare forms *ēnzi* and *entari* were formed at an earlier stage after the unattested phonologically regular singulars *\*ēzzi* and *\*ētta* (cf. attested pret. 3rd sg. *ēt* cited above).

## 1.2.3 Initial *\*yu*

There is only one example, but it is assured by the word equation Hittite *iugan* /yugan/ 'yoke' = Skt. *yugám,* Grk. *zugón,* etc. The Hittite word is in all clear instances neuter. The oft-cited ᴳᴵˢŠUDUN-*aš* in *KUB* VII 8 III 6 (broken context) may be gen. sg.

## 1.2.4 Orthography of initial *y*

Initial /ye/ and /yu/ are necessarily written as *i-e-* and *i-u-,* there being no signs for *ye* and *yu-* Initial /ya/ is written as *ya-, i-a-* and *i-ya-.* For examples of this alternation see the examples in 1.2.1 above. The situation is analogous to that for initial /wa/, but with one important difference. The reader will have noticed that in the case of initial /wa/, spelling with the sign *wa-* is normal and the redundant spellings *u-wa-* and *ú-wa-* are comparatively rare. In the case of initial /ya/, *ya-* and *i-a-* are rare, and *i-ya-* normal.

The reason for this is clear: in the case of initial /wa/ there are no examples of spellings *ú-a-* or *u-a-* (why these do not occur is unknown

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[40] The loss of *\*h₁* in *\*ih₁-anti* would produce in the first instance *\*i-anti* with hiatus. One might except the result of this to be /iyantsi/ with insertion of the homorganic glide *y* into the hiatus. Support for the result of initial *\*ih₁V-* being /yV-/ is found in the parallel development *\*au-h₁eiti* > *\*u-h₁eti* > *\*u-ęti* > /wętsi/ *ú-e-ez-zi* 'comes': see 2.2.3.

to me). Therefore the only motivation for the spelling *u-wa-* or *ú-wa-* is the parallel with *ú-e-* and *ú-i-* (and the remoter one of clarification against /pi/ or /pe/). On the other hand, in the case of initial /ya/, both *ya-* and *i-a-* are acceptable spellings. Thus the spelling *i-ya-* is not merely favored by *i-e-* and *i-u-*. It also represents the conflation of the two simpler spellings *ya-* and *i-a-*. That this is the correct explanation for its frequency is confirmed by the parallel case of internal /-Vwa/, which is spelled *-V-u-a-*, *-V-wa-* and (most often) *-V-u-wa-*, the last being the conflation of the first two (see 2.1.6). For yet another example of the spread of a conflated spelling compare the distribution of the spelling *-ēzza/-izza* for the pronominal ablative ending /ęts/, which consists of the etymological spelling *-ēz/iz* plus *-za* from consonant-stem nouns: there are no occurrences of *-ēzza/-izza* in Old Hittite manuscripts, six in Middle Hittite manuscripts, 26 in Neo-Hittite copies of older texts, and 36 in Neo-Hittite texts (see my dissertation, note 12 above, p. 447). It is clear from the occurrences of *-ēzza/-izza* that the *-za* is redundant, having no phonological or functional significance. The same is true of the redundant vowel signs in the intervocalic[41] and initial spellings *u-wa/ú-wa* and *i-ya*, which are to read as /wa/ and /ya/.

## 2.1 Intervocalic *\*w*

Intervocalic *\*w* is preserved in Hittite, except adjacent to *\*u*, where it is dissimilated to *m*.

## 2.1.1 Sequences of *\*ewV*

Original *\*ewo* appears in forms of *nēwa-* 'new' and *ewa-* 'barley': acc. sg. *newan* <*\*néwom*, nom.-acc. sg. *ewan* <*\*yéwom*, gen. sg. *ewaš* < *\*yéwos*. The denominative verb *newaḫḫ-* reflects *\*ewa* < *\*neweh₂-* (phonetically in PIE already *\*newah-*): cf. Lat. *(re)nouāre*. The instrumental *newit* offers synchronic *ewi*, but the origin of the *i* of the instrumental ending is far from certain: see the discussion in my dissertation (note 12 above), pp. 466–471. Secondary *ewe* is attested in iterative first plurals in *-ewen(i)*: e.g. *daškēweni* 'we take', *taraškiwen* /tarskewen/ 'we said'.

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[41] To be completely explicit, 'intervocalic' means: when the preceding vowel is not respectively *u* or *i*. The interpretation of the spellings *Cu-u-wa-* and *Ci-i-ya* is a separate issue: see 3.1.1 and 3.2.1.

## 2.1.2. Sequences of *owV

Original *owe is attested in the first plurals of *-ske/o- and *-ye/o-verbs as -awe-: pišgaweni 'we give', taršigawēn /tarskawen/ 'we said', tūriyaweni 'we hitch up', aniyawen 'we carried out', etc. For *owi one may cite indirectly Luv. ḫawi- 'sheep' < PIE *h₃ewi- (phonetically *howi-).

Sequences of *owV are also probably attested indirectly in the oblique forms of Hittite u-stem adjectives. A Hittite u-stem adjective such as panku- 'total, common' reflects an original 'proterokinetic' paradigm: anim. nom. sg. *bhénĝh-u-s, gen. sg. *bhnĝh-éu-s, dat. sg. *bhnĝh-éw-ei, etc. (cf. Skt. bahús, bahós, baháve, etc.). In Hittite this inflection is represented by pankuš, pangawaš, pangawi, etc. In view of newa- and ewa-, the sequence -awV- can hardly continue *-ewV-. There is considerable evidence elsewhere for an o-grade variant in the genitive singular (whatever its ultimate origin): PIE *-ou-s > Goth. -aus, Lith. -aus, OCS -u, Oscan -ous. With the usual replacement in Hittite of 'closed' inflection in -s by 'open' inflection in -as, a pre-Hittite *-au-s (< PIE *-ou-s) would have led to the attested gen. sg. -aw-aš. From there the oblique stem -aw- could have spread at the expense of *-ew-.[42] Compare the development in i-stem adjectives in 2.2.4.

## 2.1.3 Other sequences of *VwV

The Hittite adverb awan reflects *aw-Vn (cf. Skt. áva, Lat. au- and especially Luv. awi- 'come' < *aw-ei-). Hitt. nāwi 'not yet' shows synchronic awi or āwi, but the etymology is not clear. Secondary āwe < *āyowe is attested in the first plurals of -ā(i)- verbs: tarmāweni 'we nail down', ḫandāwen 'we arranged', etc. (for *āyo < ā see 2.2.2 below). Old *iwe appears in first plurals of the ḫi-conjugation such as pīweni 'we give', ḫalziwen 'we called', which are archaisms (see Jasanoff, op. cit. 88). Hitt. iwar 'as, like' is cognate with Skt. iva 'as, like', but the second vowel is ambiguous.[43]

## 2.1.4 Dissimilation of *w to m

The fact that *w is dissimilated to m in Hittite either before or after *u has been recognized for some time: see Kammenhuber, HbOr

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[42] Balto-Slavic also shows the oblique stem in *-aw- outside the gen. sg.: Lith. dial. nom. pl. -ous < *-aus < *-awes; OCS dat. sg. synovi, nom. pl. synove, gen. pl. synovŭ. However, since Balto-Slavic *-ew- becomes *-aw- before a back vowel, it is not entirely certain that the gen. sg. in *-ous was the only source of *-aw-: see Vaillant, Gram. comp. 1.110 and 2.110, and Endzelin, Comp. Phonol. 158.

[43] Przyluski, RHA 2 (1932) 225 f; 3 (1934) 15 ff.

(1969) 137 with references. For the sequence *$Vwu$ see the acc. pl. of *u*-stem adjectives: e.g. *pargamuš* 'high' < *$pargaw$-$uš$ (for *$pargaw$- representing *$bhr̥ǵhéw$- see 2.1.2 above). The ending -*amuš* is regular for *u*-stem adjectives.[44] Undoubtedly because of its isolation, it is sometimes replaced by the ending -*uš* of the *u*-stem nouns: acc. pl. *pankuš, i-dāluš*, etc. Occasional *u*-stem plurals in -*auš* do not represent unchanged /-awus/, but rather analogical forms after the *i*-stem adjectives: *pargauš* 'high' = /barga-us/ with hiatus after *šallauš* /salla-us/ < *$sallayus$ to *šalli*- 'great' (see 2.2.4 below). Influence in the opposite direction is also attested: GAL-*lamuš* 'great' = *šallamuš* (*KBo* XII 89 III 11) instead of correct *šallauš* after *idālamuš*, etc.

The change of *$uwV$ to *umV* is seen in the first plurals and verbal nouns of verb stems in -*nu*-: e.g. *waḫnum(m)eni, waḫnum(m)en, waḫnum(m)anzi, waḫnumar* from *waḫnu*- 'turn' beside regular *tiyaweni, tiyawen, tiyawanzi, tiyawar* from *tiya*- 'step'.[45] This change must be regarded as quite regular: the aberrant forms of the horse-training texts (*waḫnuwar, waḫnuwawar, uwaḫḫuwar*, etc.) are errors of the non-native author (along with the hypercorrect participle *waḫnuman* at *KUB* I 11 IV 24).

In the case of the verbal noun the originality of the forms in -*war*, -*wanzi* (with *w*) is assured by other reflexes. The verbal noun in -*war*, gen. sg. -*waš* reflects a proterokinetic paradigm in *-*wr̥*, gen. *-*wén-s*, with generalization of the postvocalic reflex of *-*wr̥* (see Schindler, *BSL* 70 (1975) 8). Most Hittite verbs ending in a consonant form their verbal noun in -*ātar* (and infinitive in -*anna*), but there is one example of *-*wr̥*, *-*wéns* after a consonant: *ḫengur* 'offering' < *ḫenk*- 'offer', gen. *ḫenkuwaš* (*KBo* XXII 1 Vs 13; OH ms.). For Hitt. -*ur* from postconsonantal *-*wr̥* see Schindler, loc. cit., revising Eichner, *MSS* 31 (1973) 73 ff: further discussion below in 3.1.3.[46] The Luvian infinitive in

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[44] My files show 49 instances of the accusative plural in -*amuš* from eight different stems, versus 12 examples of -*uš* from three stems and six of -*auš* from three stems. In view of the indisputable converse change from *-*uwV*- to -*umV*-, the interpretation of -*Vmu*- as a mere 'substitute spelling' for /-Vwu-/ (Neu, *StBoT* 18 (1974) 121–122) seems unnecessary and ad hoc.

[45] The status of the spellings in double -*mm*- in these forms deserves further study. Whether they are linguistically real or merely graphic, they are clearly secondary: Old Hittite manuscripts show consistently single *m*, as expected: *waḫnumeni* (*KBo* XVII 1 II 21), *tūmeni* (*KBo* XVII 4 III 12, etc.).

[46] Eichner, op. cit. 62 and 72, tentatively assigns *ḫenkur* to the acrostatic *méḫur* type with long *$ē$*, but the genitive *ḫenkuwaš* now falsifies this: a gen. sg. *$h_2énkwn̥s$ would have led to *$ḫenkunaš$ like *meḫunaš*. The verb *ḫenk*- 'offer' comes from *$h_3e$-$h_1enk$-, i.e., the preverb *$h_3e$- seen in Hitt. *ḫatk*- 'close' and *ḫašdwēr* 'twigs, branches' as well as Grk.

-una is undoubtedly the 'directive' of the verbal noun in -war, just as Hitt. -anna is the directive of the verbal noun in -ātar (for CLuv. -una < *-wena, compare CLuv. pres. first pl. -un(n)i < *-weni; Carruba, Sprache 14 (1968) 18–19). Forms of the verbal noun in Hittite thus definitely have original w.[47]

The matter of the first plurals in -numeni beside regular -weni is of course complicated by the fact that languages outside Anatolian show a first plural ending with a common element *-me-.[48] Pedersen, Hitt. 88 f, suggests that the regular Hittite ending in -w- comes from the PIE dual. For other proposals see Sommer, HuH (1947) 59, and Watkins, Idg. Gram. III/1.47–48. Whatever the explanation for Hitt. -wen(i) and CLuv. -un(n)i beside *-me- elsewhere, it is unlikely that Hittite -men(i), which occurs only after u(!) directly reflects an old ending with initial m.[49]

It is true that the endings -umeni, -umen, -umar and -umanzi do occur outside the -nu- verbs. They also appear in a group of synchronically thematic verbs: arr(a)- 'wash', arda- 'saw', ḫulli- 'fight', padda- 'bury', pēda- 'carry off', šanna- 'conceal', šunna- 'fill', dā- 'take', uda-

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[47] okéllō 'drive to land' and ózos 'branch', plus the verb *$h_1$enk- (Skt. aśnóti 'attains', Lith. nešù 'carry', etc.). The same form in the middle produces Hitt. ḫenk- 'bow' < 'offer oneself'. Hitt. ḫenkan 'death' is also likely a neuter n-stem from this verb: 'portion' > 'fate' > 'death'. The details cannot be fully treated here, but note the forms ḫa-in-kán-ta and ḫa-ik-ta-ri (OH mss.) representing /ha-ink-/ and /ha-ik-/. Cf. note 141.

[47] The Hittite supine in -wan is surely the endingless locative of the same verbal noun: *-wén. Compare Grk. infinitives in -men. The infinitive in -wanzi is the corresponding ablative built on the locative: -wanzi < *-wen-ti (see my dissertation, note 12 above, pp. 411–412 and 455 f, and Jasanoff, MSS 31 (1972) 123 ff).

[48] Evidence for an inherited first plural ending in Anatolian with m remains weak. Oettinger, Stammbild. 566, note 12, reconstructs a first plural preterite ending *-mēn, based on HLuv. -min and indirectly on OH spellings such as tumēni. However, the Hitt. plene spellings may indicate the accent instead of a long vowel: /duméni/. More importantly, Morpurgo-Davis, KZ 94 (1980) 93 ff, has shown that -min is a first plural present ending. In view of the relationship of preterite first plural -han to preterite first singular -ha, the present first plural -min may be similarly modeled after present first singular -mi (ibid. 100). The CLuv. first plural preterite ending -man cited by Carruba, Sprache 14 (1968) 13, is far from assured.

[49] In view of the well-established Hittite rule *-uw- > -um- and the lack of proof for inherited m in Luvian, a direct comparison of the Hittite ending -men(i) to those with -me- elsewhere, as made by Watkins, Idg. Gram. III/1.35, is misleading. In principle, his proposal that the complementary distribution -umeni: -weni is secondary is possible, but he can offer no evidence for it, and his alleged parallel of -ya/-a 'and' is certainly false: the form memal-ya (KBo XV 34 III 8) is not in an OH manuscript, but a MH copy. The conjunctions -ya/-a are in complementary distribution in OH manuscripts and reflect a single preform: see note 94.

'bring', *wašta-* 'sin', *zinni-* 'finnish' and also the compounds *penna-* and *unna-* 'hin- / hertreiben', which inflect in part as thematic stems.[50] The *-um-* in several of these verbs may be directly derived by dissimilation from Sievers-Lindeman variants in *$-uw-$:

The thematic inflection of *dā-* 'take' in the singular *(daḫḫe, datti, dāi)* is secondary, whether one follows Oettinger, *Stammbild.* 501 *(daḫḫe* phonologically from *$*dh_3\text{-}h_2ei$)* or Watkins, *Idg. Gram.* III / 1.81–82 and 110 (singular stem *da-* $<$ *$*dh_o e/o\text{-}$* created by resegmentation of a third singular *$*dh_3\text{-}e/o$* as stem *$*dh_3 e/o\text{-}$* plus zero ending). The original athematic first plural would have been *$*dh_3 wén$* (whether one takes this as preterite or as the present before the addition of the particle *-i* is inconsequential). The general loss of laryngeals in Anatolian in the environment T-RV is likely, though not strictly provable: cf. *$*\text{-}dh_2 we$* $>$ *-ttuma* immediately below and also *$*dhh_1 yénti$* $>$ *tianzi* /dyantsi/ 'they place'. Therefore Anatolian would have had a first plural *$*dwen$* and beside it a Lindeman variant *$*duwen$* (on the process see Lindeman, *NTS* 20 (1965) 38 ff). The latter gives regularly Hitt. *$*dumen$*, hence *dumeni*. The attested preterite first plural is *dāwen*, but this is clearly modeled after the singular: the compounds *pēda-* and *uda-* show regular *pēdumen, utum(m)en*.[51] From these the *-um-* forms spread to other thematic *ḫi*-verbs in *-da-/-ta-*.

The originally athematic first plurals and verbal nouns of *arr(a)-, šanna-, šunna-, tarna-* and *zinni-* would have also provided Sievers environments (even with the restrictions proposed by Schindler, *Sprache* 23 (1977) 64): e.g., PIE *$*/\text{é}rh_2wr/$* = phonetically *$*[\text{é}rhuw\underset{\circ}{r}]$* $>$ Hitt. *arrumar*, *$*/trnh_2wén/$* = phonetically *$*[t\underset{\circ}{r}nhuwén]$* $>$ Hitt. *tarnumen*.[52] After these verbs developed secondary thematic singulars *arra-, šunna-, tarna-*, etc. they could then serve as the model for *penna-* and *unna-:* hence *pennumeni*, etc.[53]

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[50] The appearance of *-meni* in *umeni, aumeni*, etc. is of course predictable from the stem *u-/au-* 'see'.

[51] Oettinger, *Stammbild.* 566, note 12, has a similar analysis of *dumēni* $<$ *$*duweni$*, which is termed a 'Sievers-Edgerton Variant'.

[52] The syllabification of the weak stems as *$*t\underset{\circ}{r}nh_2\text{-}$*, *$*su nh_x\text{-}$* and *$*sinh_1\text{-}$* is expected after the strong stems *$*t\underset{\circ}{r}neh_2\text{-}$*, *$*suneh_x\text{-}$* and *$*sineh_1\text{-}$*. In the case of *ḫullumen*, one may assume that Sievers was still operative after the pre-Hittite change *$*wR > uR: *h_2wl\underset{\circ}{h}_2wén$* $>$ *$*h_2ulh_2wén$* (becomes *$*h_2ulh_2uwén$* by Sievers) $>$ *ḫullumen*. Alternatively, since the entire inflection of *ḫulli-* is secondary after the type of *zinni-* (see 1.2.1), *ḫullumen* may likewise be analogical.

[53] The forms in *-num(m)-* from *kuen-* 'kill' are clearly a secondary Neo-Hittite development, as shown by Oettinger, *Stammbild.* 117–118, but his explanation of the origin of these forms can hardly be correct. A development of *kuénir* to *kuénnir* because of the

In similar fashion, the Hittite second plural middle ending *-ttuma* may be derived from a Sievers variant of PIE *-dh₂we*.[54] For the essentials of this derivation see already Neu, *StBoT* 6 (1968) 137, Kammenhuber, *HbOr* (1969) 326, and especially Seebold, *Das System d. idg. Halbvokale* (1972) 128–129, who compares specifically Skt. *-dhu(v)am* beside *-dhvam*. My reconstruction of *-dh₂-* instead of *-dh-* is required by the Hittite spelling with double *-tt-/-dd-*, which is twice as frequent as that with single consonant: see the examples in Neu, *StBoT* 6.26 ff. The equation Skt. *dh* = Hitt. *-tt-/-dd-* is entirely parallel to that of Skt. *h* = Hitt. *-kk-* in *mah-* 'great' = *mekk(i)-* 'much' < *meĝh₂-*.[55]

There is one other likely case of *-um-* < *-uw-* arising from a Lindeman variant. The Hittite second plural pronoun (nom. *šumeš*, dat.-acc. *šumāš*) is derived via metathesis from a base *usme-* by G. Schmidt, *Stammbildung und Flexion d. idg. Personalpronomina* (1978) 215 ff (following Sturtevant and others). Schmidt also explains CLuv. *unza* 'you' from the same base *usme-* by another metathesis(!): *usm-* > *ums-* > *unz-*. As an essentially irregular process, metathesis is virtually impossible to disprove in any specific case. However, the assumption of two different metatheses in Anatolian simply in order to derive both *šum-* and *unz-* from the same base seems highly questionable.

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root accent is contradicted by several examples, among them the forms of *han-* 'draw water', which are root-accented throughout and show consistent single *-n-*. His derivation of *kuennumen* from *kuewen* by the introduction of a Sievers variant *-uwen* is impossibly anachronistic. The dissimilation of *-uw-* to *-um-* is a pre-Hittite rule which must have ceased to operate before the loss of intervocalic *y*: see 2.1.5 below. Any form *-uwen* created between Old and Neo-Hittite would have remained. The NH forms of the verb *kuen-* all point to a synchronic stem *kuenna-*, which would naturally have a first plural *kuennumeni*, etc. after the type of *šanna-*, *šunna-*, *penna-*, etc. The origin of the new stem *kuenna-* remains obscure.

[54] It is at present difficult to tell whether Luv. *-duwar(i)* represents /-twar(i)/ from the non-Sievers variant *-d(h₂)we* or unchanged /-tuwar(i)/ from the Sievers variant *-d(h₂)uwe*. The single example *az-tu-u-wa-ri* with scriptio plena is not sufficient to prove /-tuwari/. Current evidence for the dissimilation *-uw-* > *-um-* in Luvian is slim (see note 58), because crucial forms such as first plurals from *-nu-* verbs are lacking.

[55] Since PIE *Dh₂* leads to *D* in Greek, not *Th* (note *mégas* 'great'), the derivation of Skt. *-dhva(m)* and Anat. *-tt(u)wa* from *-dh₂we* necessarily excludes Grk. *-(s)the*. This is not a serious objection, however, since the latter is probably an innovation after the first plural ending *-me(s)tha* (cf. Hitt. *-wašta*): see Neu, *StBoT* 6.130 ff.

Another example of Hitt. *-tt-/-dd-* < PIE *dh₂* may be attested in *padda-* 'dig', which may be plausibly derived from a root *bhedh₂-* seen also in Lat. *fodiō* 'dig', OCS *bodǫ* 'stab' and Lith. *bedù* 'dig'. This derivation is supported by the inflection of the cognates listed: see Jasanoff, *Heth. und Idg.* 87. Because of Grk. *mégas* and Goth. *mikils* < *meĝh₂-*, the reconstruction *bhedh₂-* necessarily excludes derivation of Grk. *bóthros* 'pit' and Goth. *badi* 'bed' from this root (cf. Pokorny, *IEW* 112).

Schmidt himself assumes a PIE zero-grade *us- for the second plural parallel to *n̥s- in the first plural (> Hitt. anz-aš, Luv. anza, Goth. uns, etc.). Given a Pre-Luvian pair of first plural *ans- beside second plural *us-, a simple generalization of the n from one to the other seems reasonable: *uns- (> unz-) replacing *us- after *ans- (> anz-). Compare the generalization in Hittite of the final velar of the first singular ūk 'I' to the second singular zik and tūk (vs. Palaic and Luvian tī, tū). There is no evidence that the Luvian second plural pronoun ever contained a suffix *-me-.[56]

As for šumeš, it may be derived directly from a Lindeman variant *suwḗs of the form *swḗs which Schmidt reconstructs for Celtic (OIr. sí, Welsh chwi).[57] Since the subject form šumeš could be analyzed synchronically in Hittite as containing the nominal nom. pl. ending -eš, it could then serve as the model for dat.-acc. šum-āš (cf. first plural anz-āš), which replaced the Hittite continuant of an oblique form in *us-. The enclitic oblique form -šmaš (e. g. in nu-šmaš) may be derived regularly from *(nú)-šumaš in enclisis. Evidence for this change is provided by našma 'or' < nášsu-ma (attested once in KUB IV 72 II 4): see Pedersen, Hitt. 200. A full discussion of the very complex problem of the PIE personal pronouns cannot be undertaken here. The suggested derivation of Hitt. šumeš from *s(u)wḗs is at least phonologically regular and based on a PIE preform which is supported by Celtic and Germanic.

The change of uwV to umV is also attested in the verbs enumā(i)- 'make warm' and esḫarnumā(i)- 'make blood-red', which are built on the respective synonyms enu-/inu- and esḫarnu- with the suffix -wā(i)- attested in ḫišwā(i)- 'lie open' to ḫašš-/ḫeš- 'open'. The sequence -nuwā(i)- becomes -numā(i)- by the regular dissimilation rule. An original deverbative suffix -wā(i)- is unlikely, and the inflection points to a denominative. The origin of the formation must lie in denominatives in -ā(i)- to u-stems or wo-stems.[58]

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[56] The interpretation of the hapax ušmantin (KUB XXXV 133 II 28) as 'euer, votre' by Meriggi, WZKM 53 (1957) 221, has no foundation in the text. The context is direct speech to the Storm-god with second singular imperatives and in the immediately preceding line the form tu-ú-iš, which almost certainly is the second singular possessive 'your'. There simply is no Luvian evidence for an *usme- 'you (pl.)'.

[57] Goth. izwis etc. probably also contains the same *swes. Schmidt's arguments in favor of *zgʷhes are hardly compelling. The initial i- may be nothing more than the initial j- of the nominative jūs, which would necessarily become syllabic before *swes. Compare Grk. emé with the e- taken over from egṓ.

[58] Other examples of *uw to um are problematic. Friedrich, HW 150, suggests that nekumant- 'naked' is from *negʷ-, remade after adjectives in -want-. However, the forms

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## 2.1.5 Secondary *uwV*

Original sequences of *\*uwV* become Hittite *umV* by the dissimilation rule just discussed. Attested Hittite sequences of *uwV* arise secondarily by various means. The chief source of Hittite *uwV* is the insertion of *w* into a hiatus *\*u-V* caused by loss of an intervocalic *\*y* or laryngeal.

An example of the first type is *uwanzi* 'they come' < *\*u-anzi* < *\*uyanzi* < *\*au-h₁y-enti* (with loss of *\*h₁*, then *\*y*). Likewise, the regular present third plural of *ḫuwāi-* 'run' is *ḫūwanzi* < *\*h₂uh₁y-énti*. The preservation of *y* in the alternate *ḫuyanzi* is analogical after other verbs of the class: *ḫ(u)wāi: ḫuyanzi* like *išpāi: išp(i)yanzi*. For additional examples of secondary *-uwV-* < *\*-uyV-* see 2.2.3 below. Cf. also *šuwe-* < *\*suh₁-ye-* in 1.2.1.

Since *\*h₁* is lost everywhere between vowels, an original internal sequence *\*-uh₁V-* also becomes *\*u-V* and then *-uwV-*. Two likely examples of this development are cited by Eichner, *MSS* 31 (1973) 54: *šuwēl/šuwīl* 'thread' < *\*suh₁-el* (cf. Lat. *suō, sūtus* 'sew') and *ḫūwant-* 'wind' < *\*h₂uh₁-ént-* '(the) blowing (one)', participle to *\*h₂wéh₁-ti* 'blows' (> Grk. *áēsi*).[59]

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of *eku-* 'drink' (< *\*ekʷ-* or *\*egʷh-*) show that the change of *\*w* to *m* does not take place after a labiovelar, which seems rather to lose its labial element: first plural *akueni* /agweni/, not *\*akumeni*. Therefore a *\*negʷ-want-* would still yield *\*nekuwant-*. Benveniste, *BSL* 33 (1932) 138, assumes *\*negʷ-ant-*, with the productive Hittite suffix *-ant-* which is added to adjectives: *aššu-, aššu(w)ant-* 'good', etc. But *\*negʷ-ant-* would also produce *\*nekuwant-*. Benveniste's claim that *-kum-* represents *-guw-* from *\*gʷ* is entirely ad hoc. The derivation of Eichner, *MSS* 31.79, of *nekumant-* from *\*megʷnent-* (> Av. *maɣnan-ta-*) by distant metathesis seems farfetched. The most likely solution is that offered by Lindeman, *RHA* 23 (1965) 32: *nekumant-* /negʷmant-/ is for *\*nekunant-*, an *ant-*-extension to a stem *\*nekuna-* /negʷna-/ which is directly comparable to Skt. *nagná-* < *\*ne/ogʷno-*. For the dissimilation of *n ... n* to *n ... m* in Hittite one may compare Av. *maɣna-* with the same dissimilation in the opposite order. A dissimilation must also be assumed for Grk. *yumnós:* see Cowgill, *Evidence for Laryngeals²* 156. The word for 'naked' would thus not reflect a change of *\*uw* to *um*. Luv. *šaššūmāi* and *kiklimāi-* for *\*kiklumāi-* 'coat with iron' (see Melchert, *JCS* forthcoming) suggest *\*-uwāi- > -umāi-* for Luvian, but these examples are less then assured.

The adverb *nūman* 'never' (spelled twice *nūwan*) may show secondary *um* from *\*uw*, but the etymology is obscure.

[59] I characterize these two examples as 'likely', because in the first case the quality of the laryngeal is not absolutely assured, and one could perhaps reconstruct *\*suh₃-él* (see immediately below). Hitt. 'wind' is spelled both *ḫūwant-*, which suggests /huwant-/ < *\*h₂uh₁-ént-*, and *ḫuwant-*, which suggests /hwant-/, the expected result of *\*h₂wéh₁-ṇt-* (see 2.2.1). Vedic *vānt-* and Grk. *áenta* 'blowing' permit, though they certainly do not prove, reconstruction of an acrostatic present *\*h₂wéh₁-ti, *\*h₂wéh₁-ṇti*, with participle *\*h₂wéh₁-ṇt-*. An example from an OH manuscript, which would settle the matter of /huwant-/ vs. /hwant/ (see 3.1.1), is presently lacking.

In two other cases it is not yet clear which specific laryngeal has been lost. The adjective šu-u- 'full' is attested in the anim. nom. sg. šu-u-uš, nt. nom.-acc. sg. šu-u and šu-u-ú, anim. acc. pl. šu-u-wa-mu-uš and in the extension in -ant-: šuwant-. The hyper plene spelling šu-u-ú, the acc. pl. stem šu-u-wa- and the obvious relation to šunna- 'fill' (< *sunh$_x$-) strongly suggest that šu-u-uš should be read as /su-us/ with a hiatus resulting from a laryngeal loss (likewise Oettinger, *StBoT* 22 (1967) 39, note 76, and Watkins, *Flexion und Wortbild.* 378).[60] Watkins reconstructs *h$_3$ for this word and proposes a general loss of *h$_3$ between vowels in Hittite. However, good evidence for the treatment of *h$_3$ in this position is lacking, and *h$_1$ is equally possible.[61] In any case, the adjective 'full' is a *u*-stem, with regular development from a proterokinetic paradigm: anim. nom. sg. *séuh$_{1/3}$-u-s > šu-u-uš /su-us/, anim. acc. pl. *suh$_{1/3}$-éw-us > *su-ew-us replaced by *su-aw-us > *su-am-us (see 2.1.2 and 2.1.4) and finally šuwamuš /suwamus/ with hiatus-filling *w*.[62]

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[60] In *Stammbild.* 298, note 79, Oettinger argues rather that šū- is a root noun *seuh$_2$- because of šunna-. However, he does not account for the unexpected loss of *h$_2$ in the former: cf. šūḫza in *KUB* XLIII 30 III 18 which is probably the ablative of a root noun *šuḫḫ- 'pouring' < *seuh$_2$- 'pour'. Furthermore, the double -nn- of šunna- can represent *-nh$_1$- (and probably *-nh$_3$-) just as well as *-nh$_2$-: cf. išparr(izzi) < *sperh$_1$-.

[61] There is perhaps even positive evidence for *h$_1$ in this word. Oettinger, *Stammbild.* 119 (following Laroche, *RHA* 31 (1973) 91 ff), correctly separates synchronic šūniya- 'immerse, sow' (with acc. of object and loc. of container) from šunna- 'fill' (with acc. of container and inst. of liquid). It is also clear that the NH form of the former is a *ya*-stem šūniya-. However, the spelling šūnizzi/šūniēzzi in copies of OH texts can also be read /sunetsi/. If one assumes a seṭ root *seuh$_1$-, the nasal present would be *su-né-h$_1$-ti, *su-n-h$_1$-énti, which would give regularly Hitt. /sunetsi/, /sunnanzi/: cf. ḫurnēzzi 'hunts' < *h$_2$wr̥-né-h$_1$-ti and zinnizzi, zinnanzi 'finishes' < *si-né-h$_1$-ti, *si-n-h$_1$-énti (Oettinger, *Stammbild.* 151–152). In zinni-/zinna- the double -nn- of the plural was generalized, and eventually zinnizzi gave way to zinnāi after the type of tarnāi, tarnanzi (< *tr̥-né-h$_2$-ti, *tr̥-n-h$_2$-énti). The attested paradigm of šunna- 'fill' (šunnāi, šunnanzi) can thus be derived from the original plural *su-n-h$_1$-énti, while šunezzi would reflect the original singular *su-né-h$_1$-ti. For the renewal of šunezzi /sunetsi/ by šuniyazzi compare ḫulliyazzi 'fights' for ḫullizzi, which also offers a parallel for the split of one paradigm into two (see 1.2.1 with note 33). The original unity of 'fill' and 'immerse' with differing syntax would be normal for PIE: cf. *pleh$_1$- 'pour' and 'fill' and see Haudry, *l'emploi des cas en védique* (1977) 237 ff.

[62] The derivation of šumrā(i)- 'be pregnant' < 'be full' (Oettinger, *Stammbild.* 298, after Neumann) is semantically attractive, particularly since Hitt. šū- 'full' < *seuh$_{1/3}$- is surely related to Skt. sūtu- 'pregnancy'. His derivation of the base *šu-mar from a verbal noun *šū-war < *seuh$_2$- 'be full' is not possible. Since *h$_2$ is not normally lost before *w (cf. ḫ(u)wāi 'runs' < *h$_2$wéh$_1$yei), we would expect the verbal noun of a *seuh$_2$- to be *séuh$_2$-wr̥ > *šuḫḫu(wa)r, and this is confirmed by attested šuḫḫuwaš to *suh$_2$- 'pour'. Oettinger's *šūmar 'being full, pregnancy' can easily be derived as an abstract 'fullness' from the adjective šū- 'full' with the Anatolian suffix -mar: cf. miummar 'kindness' < miu-

Another example of -uwV- produced by loss of a laryngeal is found in Hitt. *nūwa* 'still, yet', which may be derived from *nu* 'now' plus *-ha* 'and' seen in CLuv. *-ha* and Hitt. geminating *-a* 'and'. For both the formation and the meaning compare Goth. *nauh* = OHG *noch* < *$nu$-$k^we$. The *h* of *-ha* 'and' may represent either *$h_2$ or *$h_3$: see the detailed discussion in Excursus VIII.

A rather different explanation is required for the sequence -uwa- in the adverbs *tu-u-wa* /duwa/ 'far' and *tu-u-wa-az* /duwats/ 'from afar'. These represent forms of an old root noun *$dweh_2$- 'distance' (in space or time), whose accusative is preserved in Hitt. *tu-wa-a-an ... tu-wa-a-an* 'here ... there' and Grk. *dēn* '(for) a long time': see Schindler, *BSL* 67 (1972) 37. The original paradigm would have had a nom. sg. *$dwéh_2$-$s$, acc. sg. *$dwéh_2$-$m$, obl. stem. *$duh_2$ᶜ. The nominative would probably have produced Hitt. *$dwaš$ (cf. *haššaš* 'hearth' < *$h_2eh_xs$-$eh_2$-$s$). A PIE *$dwéh_2$-$m$ would lead to Hitt. *$dwahhan$, in which case the attested /dwān/ would be analogical after the nominative. However, if PIE */-eh₂m/ was already phonetically *[-ām] (see Hollifield, *Sprache* 26 (1980) 48), then Hitt. /dwān/ would be regular. The oblique stem *$duh_2$- plus ending with initial vowel could hardly yield anything but *$duhhV$-: cf. *tuhhai*- 'cough, gasp' < *$dhuh_2$- (Oettinger, *Stammbild.* 377, and others). Hitt. *tūwa* and *tūwaz* therefore cannot reflect *$duh_2$-V-. If they were analogical after the nominative (and/or accusative), we would expect *$tu$-$wa$-$a$ and *$tu$-$wa$-$a$-$az$ with initial /dw-/.

Although the adverb *tūwa* 'far, in(to) the distance' appears synchronically to be a 'directive' (allative) in *-a*, its actual usage may also be reconciled with a locatival origin. J. Schindler has therefore suggested to me that *tūwa* /duwa/ represents an endingless locative *$duweh_2$ which would lead to Hitt. *$duwah$ > *$duwā$ > *duwa*: cf. the neuter *o*-stem nom.-acc. pl. *-a* < *-$ā$ < *-$ah$ < *-$eh_2$. Endingless locatives are attested elsewhere in Hittite: *dagān* 'on/to the ground' (note the directional as well as locatival usage!), *šiwat* '(on the) day'. The preservation of *uwa* here in the Lindeman variant *$duweh_2$ versus its usual dissimilation to *uma* (see 2.1.4) would be due to the initial /dw-/ of /dwān/.[63]

## 2.1.6 Orthography of intervocalic *w*

Intervocalic *w* before *e* is of course spelled with either *u* or *ú*, the only possibilities: e.g. *pi-(i)-ú-e-ni* /piweni/, *a-ni-ya-u-(e)-en* /aniyawen/.

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'gentle, kind, soft'. For the details of the *-mar* suffix see my forthcoming article in *Die Sprache*. Hitt. *šuhh(a)*- 'pour' < *$suh_2$- must be separated from *šu-u*- 'full' < *$seuh_{1/3}$-.

[63] The ablative *tūwaz* /duwats/ would be built on the endingless locative, as often: see note 47 with refs.

Likewise medial /wi/ is normally spelled *u-i* or *ú-i: ne-e-u-it* /newid/, *na-a-ú-i* /nawi/. The sign *wi* is also used: *na-a-wi* /nawi/. The sequence /Vwa/ is most often spelled -*V-u-wa*-, a conflation of -*V-u-a* and -*V-wa*-. An exhaustive survey is impossible here, but the following facts may serve as evidence for the relationship claimed for these spellings here and above in 1.2.4.

As to the relative frequency, a survey of the gen. sg., dat.-loc. pl. and ablative of *u*-stem adjectives (i.e., stems in /-awas/ and /-awats/) shows 133 examples of -*a-u-wa*- versus 32 of -*a-wa*- and only 16 of -*a-u-a*-. As to the relative chronology, OH manuscripts show a preference for -*V-wa*- or -*V-u-a*-: *KUB* XXXVI 110 Rs 11 *in-na-ra-u-an-za, KBo* XVII 1 I 35.37 *ša-a-wa-(a)-tar-aš*, but *KBo* XX 8 Vs 7.9.10 does have both *ar-ki-ú-az* and *ar-ki-ú-wa-az* and *pa-ú-wa-(a)-an-zi*. Particularly instructive is the contrast between the OH and MH manuscripts of Table I of the Laws: *KBo* VI 2 III 22 *a-ra-u-aš,* III 43 *tu-u-ri-ya-wa-aš* and III 47 °-*ya-u-aš* versus *KBo* VI 3 III 25 *a-ra-u-wa-aš* and III 48 and 51 *tu-u-ri-ya-u-wa-aš*. This chronological replacement of -*u-a*- and -*wa*- by -*u-wa*- supports the explanation of the last as a conflation of the first two.

## 2.2 Intervocalic *y

It has long been assumed that intervocalic *y is lost in Hittite between like vowels: see in addition to the references in 1.0 above also Pedersen, *Hitt.* 171 f. Oettinger, *Stammbild.* 338, proposes that *y is lost generally between vowels. This can be shown to be correct, but Oettinger himself does not realize the full consequences of this change, which are nearly as far-reaching in Hittite as they are in Greek.

### 2.2.1 Sequences of *eyV

Eichner, *MSS* 27 (1969) 31 ff, first proposed that the active transitive verb *wašš(iya)*- 'clothe' is derived from the PIE causative *woséye*- seen in Skt. *vāsáyati* and Goth. *wasjan.* Oettinger, *Stammbild.* 304, rejects this etymology because, as he shows, the oldest Hittite paradigm is *waš-šezzi, waššanzi,* which is only later replaced by the *ya*-stem *waššiya*-, as often in Hittite. What he fails to notice is that, by the loss of intervocalic *y which he himself has proposed, *waššezzi, waššanzi* is in fact the expected outcome of *woséyeti, *woséyonti.[64]

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[64] Except for the double -*šš*-. The regular result of PIE *s in Hittite is single *š*, as shown by the following examples in various positions: *ešun* 'I was', *ešer* 'they were' (root-

Let us begin with the plural. The loss of intervocalic *$y$ in a pre-Hittite *$waseyanti$ would leave a sequence *$e$-$a$ with hiatus. The attested form $wa\check{s}\check{s}anzi$ argues that the result of *$e$-$a$ is $a$, with deletion of the preceding $e$. This result is supported by other examples. The verb $p\bar{a}i$- 'give' is widely, though not universally, assumed to be a univerbation of *$pe$- and *$ai$- 'give' seen in Grk. $\acute{a}inumai$ and Toch. AB $e/ai$-.[65] However, not much attention has been paid to the phonological implications of this derivation. Based an other examples of contractions involving diphthongs, notably $p\bar{a}imi$ 'I go' < *$pe$-$h_1eimi$, the strong stem of *$pe$-$ai$- should also be *$p\bar{a}i$-: *$p\bar{a}i\hbar\hbar e$, etc. The attested stem is rather $p\bar{e}$-, which points to a short diphthong *$pai$-, suggesting in turn that in *$pe$-$ai$ the *$e$ was deleted before the following $a$.[66]

Further support for *$e$-$a$ > $a$ is found in the plurals and participles of Hittite $e$-statives, although the evidence is at present indirect. Watkins, *TPS* (1971) 51 ff, has established the existence in Hittite of a set of denominative stative verbs in -$e$- < *-$eh_1$-: e.g., $nakk\bar{e}zzi$ 'is heavy' to $nakki$- 'heavy'. Some of his examples are dubious (see further 2.2.3), but many are supported by the coexistence of the base stative verb in -$e$- (< *-$eh_1$-) and the derived 'inchoative' verb in -$e\check{s}\check{s}$- (< *-$eh_1$-$s$-): $lalukke$-/$lalukke\check{s}\check{s}$- '(begin to) shine', $mar\check{s}e$-/$mar\check{s}e\check{s}\check{s}$- 'be(come) false' (the stem $mar\check{s}e$-, not $mar\check{s}iya$-(!), is demanded by $mar$-$\check{s}e$-$e$-$er$ at $KBo$ VI 2 II 55, OH ms.), $miya\hbar\hbar unte$-/$miya\hbar\hbar unte\check{s}\check{s}$- 'be(come) old', $nakke$-/$nakke\check{s}\check{s}$- 'be(come) heavy', $papre$-/$papre\check{s}\check{s}$- 'be(come) impure', $duddume$-/$duddume\check{s}\check{s}$- 'be(come) deaf'. The pattern -$e$-: -$e\check{s}\check{s}$- is entirely parallel to that of stative -$\bar{e}re$: inchoative -$\bar{e}scere$ in Latin, as Watkins points out. The denominative origin of these verbs is confirmed by the frequent

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final after accented short vowel), $e\check{s}a$ 'he sits down' (root-final after accented long vowel), $a\check{s}anzi$ 'they are' (root-final after unaccented vowel), $nepi\check{s}$- 'heaven, sky' (stem-final after unaccented vowel), 2nd sg. pres. -$nu\check{s}i$,-$ye/a\check{s}i$, -$\check{s}ke\check{s}i$ (affix-initial after accented vowel), $a\check{s}i$ 'the aforementioned' < $a\check{s}$ plus deictic $i$ (originally word-final). The double -$\check{s}\check{s}$- of $wa\check{s}\check{s}e$-/$wa\check{s}\check{s}a$- 'clothe' is surely modeled after that of $we\check{s}ta$, $we\check{s}\check{s}anta$ 'wear', where it is regular in the singular (details elsewhere).

[65] For $p\bar{a}i$- 'give' < *$pe$+$ai$- see among others Pedersen, *Hitt.* 115, Kronasser, *VLFH* 197, and mutatis mutandis Oettinger, *Stammbild.* 470. Čop, *Linguistica* 2 (1956) 51–52, compares rather TochB $pito$ 'sale's price', Ossetic $fedun$ 'pay' and OHG $feili$ 'for sale'. It is possible that the TochB word is a borrowing from Iranian instead of a cognate: see VanWindekens, *le tokh.* I.637. These forms would permit, although they do not prove, a root *$peh_1(i)$- of the same shape as other roots of the class: $i\check{s}p\bar{a}i$- 'be satisfied' < *$speh_1i$-, $d\bar{a}i$- 'place' < *$dheh_1i$-, etc. The attested inflection would then be perfectly regular.

[66] See Excursus V.

coexistence of a factive in -aḫḫ-: maršaḫḫ-, nakkiyaḫḫ-, papraḫḫ-, dud-
dumiyaḫḫ-.[67]

Oettinger, *Stammbild.* 338 ff, criticizes Watkins for ignoring plural
and participial forms of this class, citing *a*-vocalism for these forms and
implying that this contradicts derivation from stems in *-eh₁-*. In fact,
there are no assured third plurals or participles from this class,[68] but
Oettinger's claim of *a*-vocalism can be shown to be correct. As he indi-
cates, *Stammbild.* 337, Hittite denominatives in -uwe-, -uwa- (< *-uye-,
*uyo-; see 2.2.3) are transferred in Neo-Hittite to the much larger class
of denominatives in -āi-, -ā- (2.2.2): e.g. OH *kappuwezzi, kappuwanzi*
becomes NH *kappuwāizzi, kappuwanzi.* Oettinger is surely correct in
assuming that the starting point for this transfer was the forms of the
paradigm with *a*-vocalism, such as third plural *kappuwanzi*, participle
*kappuwant-.*[69] The Hittite *e*-statives also transfer to the -ā(i)- class in
Neo-Hittite: e.g., OH *ḫuišwe-* 'be alive' > NH *ḫuišwāi-.* This transfer
only makes sense if one assumes with Oettinger that the *e*-stative para-
digm also contained forms with *a*-vocalism. The preconsonantal result
of *-eh₁-* in Hittite is -e-: hence third singulars like *nakkēzzi* and the
second plural *ḫuišweten* (see further 2.2.3). However, a present third
plural in *-eh₁-n̥ti* and participle in *-eh₁-n̥t-* would have led to *-e-
anzi* and *-e-ant-*. The same deletion of *e* before *a* assumed for *waš-
šanzi* and *peḫḫe* would produce *-anzi* and *-ant-*, which would then trig-
ger the transfer to the -ā(i)- class. Everything thus points to *waššanzi* as
the regular result of *wase-anti* < *waseyanti* < *woséyonti*.[70]

The loss of *y* in the singular *woséyeti* would have produced a se-
quence *e-e* with hiatus. One would expect the two like vowels to coa-

[67] The stem forms *nakkiyaḫḫ-* and *duddumiyaḫḫ-* suggest that perhaps we should read
*na-ak-ki-e-(eš)-* and *du-ud-du-mi-e-(eš)-* as /nakye(ss)-/ and /tutumye(ss)-/, although
parallel behavior of the stem-final -i- before the two different suffixes is not assured.

[68] The NH participle *nakkiyanteš* may reflect a non-original -ya- stem, while *paprant-*
'impure' may, pace Oettinger, be simply an -ant- extension of an adjective *papra-.* The
latter would be a reduplicated form of the root *per-* seen in CLuv. *paratt(a)-* 'impurity'
and Goth. *fairina* 'guilt' = OHG *firina* 'crime'. Pokorny's explanation of the latter as
'das Außergewöhnliche', *IEW* 818, is implausible. Perhaps they are derived from *per-*
'cross over, go beyond' in the sense 'transgress', but this is uncertain. For the formation of
Hitt. *pa-pr-a-(nt)-* compare Hitt. *tatrant-* 'sharp-edged; butting (of an ox)' which is a re-
duplicated form of *der-* 'cut, split': cf. (also probably with a kind of reduplication) Eng-
lish 'tart', Germ. *Trotz* 'defiance, obstinance'.

[69] In view of the rarity of spellings of *kappuwa-, šarkuwa-,* etc. with scriptio plena, it is
possible that the remodeling only affected the singular in some verbs, producing a mixed
paradigm with singular -āizzi: plural -ănzi.

[70] If Hittite 'wind' should prove to be /hwant-/ < *h₂wéh₁-n̥t- (see note 59), this
would provide another example of *e-a > ă.

lesce into a long vowel, and this is supported by the development of *pe-h₁ei-mi 'I go', where the result is a long diphthong: pāimi (see 4.2.1 for details). If wēš 'we' is from *wey-es as Pedersen suggests, *Hitt.* 75, then we have a direct example of *eye > *e-e > ē.[71]

I know of no examples of scriptio plena in either waššezzi or any of the other verbs in -ezzi < *-eye-ti which will be cited shortly. Given the very small number of relevant examples, this may not be significant. One could still assume a reading /wassētsi/. However, this is not neces- sary. The loss of intervocalic *y and the contraction to ē in the singu- lar and ǎ in the plural created a small class of verbs with an opposition -ē-: -a-. These would have differed from the inherited thematic verbs in -ye-/-ya- and -ške-/-ška- (and in -uwe-/-uwa- < *-uye-/-uyo-; 2.2.3) only by having ē versus ǎ rather than ě versus ǎ. Under these circum- stances, assimilation of the ē: ǎ type to the much more numerous ě: ǎ class would hardly be surprising. One may therefore alternatively read /wassětsi/, with secondary replacement of ē by ě.

Another example of an o-grade causative in Hittite is lukke-/lukka- 'kindle, set fire to'. Oettinger, *Stammbild.* 273 f, derives this verb from a PIE active thematic present *léuketi, following Hoffmann, *KZ* 82 (1968) 214–220. However, Hoffmann's only support for this recon- struction is Skt. *rócati 'causes to shine', which he reconstructs from ró- cate 'shines' on the basis of várdhati 'causes to grow' versus várdhate 'grows'. He himself admits, loc. cit. 216, note 12, that the only attested Indo-Iranian transitive forms are the causatives Skt. rocayati = Av. raočǎyeiti 'causes to shine'. The antiquity of this formation is supported by the Latin transitive verb lūcēre 'kindle' in Plautus, which must be from *loukéye- (*léuke- would have led to *lūcere). Therefore one must follow Watkins, *TPS* (1971) 68–69, in deriving lukkezzi, lukkanzi 'kindle' from *loukéyeti, *loukéyonti.[72] The phonological developments are the same as those in waššezzi, waššanzi.

I emphasize that phonologically Oettinger's derivation of lukke-, lukka- < *léuke/o- and wašše-, wašša- < *wóse/o- is quite possible. However, I have just shown that derivation from causatives *loukéye/o- and *woséye/o- is equally possible. The choice of the latter explanation

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[71] It is also likely that the general Hittite nominative plural marker -eš (spelled with some frequency -e-eš in cases where the scriptio plena would not be needed to indicate vowel quality) may have originated in the i-stems: *-eyes > *-e-es >-ēs. Compare perhaps the spread of -ēs in Latin. This hypothesis, which is bound up with the treatment of unac- cented *ě and *ē in Hittite, cannot be fully examined here.

[72] Athematic lukk- 'kindle' is a NH innovation, as pointed out by Oettinger, *Stamm- bild.* 276.

rests primarily on the fact that the causative preforms of these verbs are supported by evidence elsewhere in Indo-European, while Oettinger's thematic stems have no basis anywhere.

It is worth noting that Oettinger's rejection of the causative derivation of *wašše-* and *lukke-* is motivated in part by his belief that PIE causatives in *-o-éye-* appear in Hittite in the athematic *ḫi*-conjugation (see *Stammbild.* 400–401). He is forced to admit, however, ibid. 452, that he cannot see the motivation for this development. His explanation of 'athematization' via the past participle, ibid. 453–455, is not convincing. The fact remains that all other thematic verbs in *-ye-/-yo-* in Hittite appear in the *mi*-conjugation: this includes not only synchronically transparent deverbatives and denominatives in *-ye-/-ya-*, but also denominatives in *-uwe-/-uwa-* < *-u-ye-/-u-yo-* (2.2.3) and denominatives in *-ā(i)-* < *-āye-/-āyo-* (2.2.2).

If a causative *torséye-* 'dries' becomes athematic *tarši/taršanzi* because of secondary association with *tr̥s-ent-* 'dried' as its participle *taršant-*, then why does *kappuwe-/kappuwa-* 'count', whose participle is *kappuwant-*, not also become *kappuwi, kappuwanzi*? In fact, synchronically thematic verbs in Hittite of all types do show a tendency to develop athematic forms: see NH *lukzi, lukkun* 'kindle', and infinitives *ḫulluwanzi* 'fight' and *waššuwanzi* 'clothe'. Note, however, that the finite forms point to the athematic *mi*-conjugation, not *ḫi*-conjugation. On the other hand, there is also a tendency for these verbs to become 'thematic' *ḫi*-verbs: third singulars *ḫullai, kappuwai, ḫandāi*. The one thing we do not find from original thematic *mi*-verbs is precisely athematic *ḫi*-forms: *ḫulli, *kappui*, etc. As mentioned earlier, this reflects the fact that the athematic *ḫi*-conjugation is itself an archaic category which is being replaced. Therefore there is no basis for supposing that causatives in *-eye-/-eyo-* would have behaved differently from other *-ye-/-yo-* verbs, and *lukke-* and *wašše-* confirm this. They show the same synchronic thematic *mi*-inflection as verbs in *-uwe-/-uwa-*. For the source of the athematic *ḫi*-verbs see Jasanoff, *Heth. und Idg.* 79–90.[73]

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[73] Oettinger, *Stammbild.* 416 ff, is indeed able to point to several specific equations between iterative-causatives elsewhere and Hittite athematic *ḫi*-verbs: *išpand-* 'libate' ∼ Lat. *spondeō* 'pledge'; *lāg-* 'incline' (trans.) ∼ OCS *ložiti*, Goth. *lagjan* 'lay'; *mark-* 'cut up' ∼ Skt *marcáyati* 'destroys'; *š(a)rap-* 'sip' ∼ Lat. *sorbeō*, Grk. *hrophéō* 'slurp'. These correspondences are certainly not accidental. I stress again, however, that the shift of a stem in *-eye/o-* from the thematic *mi*-conjugation to the athematic *ḫi*-conjugation cannot be motivated in Hittite. On the other hand, the replacement of an original *o*-grade athematic verb (extinct as a type except in Hittite and in retreat even there) by an *o*-grade

There is at least one more example of the development of a verb in *-eye-/-eyo-* to one in *-e-/-a-*. Oettinger, *Stammbild*. 151, derives *duwarni-/duwarna-* 'break' from an original nasal-infix present *$dhw\underset{.}{r}$-né-$h_1$-ti, *$dhw\underset{.}{r}$-n-$h_1$-énti from a root in final *$h_1$. This is morphologically plausible, and the explanation is surely correct for *ḫurne-* 'sprinkle' and *zinni-* 'finish'. It is, however, phonologically impossible for *duwarni-*. We would expect zero-grade of the root in this formation, as Oettinger reconstructs, and this is confirmed for Hittite by *ḫurne-* and *zinni-* (< *$h_2w\underset{.}{r}$-né-$h_1$- and *$s/ti$-né-$h_1$-).

As we have seen, postconsonantal *-$w\underset{.}{r}$- gives consistently *ur* in Hittite (see 2.1.4 and 3.1.3 and note *ḫurne-* < *$h_2w\underset{.}{r}$néh$_1$-). Therefore a *$dhw\underset{.}{r}$néh$_1$- could only lead to *durne-* in Hittite. Eichner, *MSS* 31 (1973) 75–76, attempts to avoid this problem by starting from a verbal adjective *dhworno-* 'broken' with *o*-grade. This is equally impossible, for *w* disappears in Hittite between a dental stop and *o*: cf. Hitt. *i-dālu-* 'bad' vs. Luv. *adduwali-* < *$h_1edw\breve{o}l$- and see further 3.1.2. Thus *dhworno-* would have given *darna-*. The only possibility is to begin with an *e*-grade noun *dhwerno-* (cf. *swepno-* 'sleep' in OE *swefn* and *wesno-* in Lat. *uēnum dare* 'offer for sale').[74] From this Hittite formed a denominative verb in the expected fashion, i.e. from the *e*-grade of a thematic noun: *dhwerne-yé-ti, *dhwerne-yónti. Compare Skt. *devayáti* < *devá-*, Grk. *philéō* < *philós,* etc. The development to *duwarni-/duwarna-* proceeds as in the causatives above. For the *i* of *duwarni-* see below II.2.4.1.

There is probably one other denominative in *-ye-/-yo-* in Hittite from a thematic noun. Oettinger, *Stammbild*. 355, claims that there are only two examples of denominatives in *-ye-/yo-* from thematic stems in Hittite, and that these show deletion of the thematic vowel. However, his *maršiya-* 'be false' does not exist: see the citation of *marše-* earlier in this section. His other example is *ušniya-* 'offer for sale', which in later Hittite does appear as a *ya*-stem. However, the only occurrence of this verb in an OH manuscript is the iterative *ušneškatta* (Laws, *KUB*

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iterative-causative, among other things, is hardly surprising. As Jasanoff shows, the original athematic inflection is replaced in various ways: by thematization, by *-ye-/-yo-*, and by *-eye-/-eyo-*. This process is still visible in the case of Grk. *hrophéō,* which stands beside thematic *hróphein*. Compare the case of the root *$h_2wegs$-, outlined by Jasanoff, *Heth. und Idg.* 85.

[74] It is immaterial whether or not this type is ultimately secondary to an ablauting *n*-stem or *r/n*-stem, as suggested by the coexistence of *supno-* (Grk. *húpnos*) and *swopno-* (Arm. *k'un* etc.), or of *usno-* (Hitt. *ušneške-*) and *wosno-* (Grk. *ônos*). See Schindler, *Sprache* 12 (1966) 67 ff.

XXIX 29 Vs 12.15). This spelling also occurs in the MH copy of an OH text, *KBo* XXI 22 Vs 19.20. In OH manuscripts the iterative stem of verbs in *-(i)ya-* is always spelled *-iške-*.[75] Therefore the iterative *ušneške-* cannot be from a base verb *ušniya-*.

There are only two possibilities, starting from a nominal stem \**ušna-* (cf. again Lat. *uēnum* < \**wesno-*). One is a denominative verb \**ušnā(i)-*: the iterative of the denominative verb *ḫatrā(i)-* 'write' is attested in *KBo* XXII 1 Rs 22 as *ḫatreške-*.[76] However, the *-ā(i)-* verbs are the one class in Hittite which is most resistant to replacement by a *ya-*stem (perhaps because the *-ā(i)-* verbs themselves are an expanding class in Neo-Hittite). Out of more than fifty *-ā(i)-* stem verbs, only two to my knowledge show any forms in *-(i)ya-*: *šamnā(i)-* 'create' (6 ×, 5 × in one text) and *šarlā(i)-* 'glorify' (1 ×).[77] Thus, although \**ušnā(i)-* is possible, its total replacement in later Hittite by *ušniya-* would be surprising.

The other possibility is that *ušneške-* is from a synchronically thematic \**ušne-/ušna-*, i.e., a denominative \**usne-yé/ó-* like \**dhwerne-yé/ó-*: cf. the independent but parallel Skt. *vasnayáti* and Grk. *ōnéomai*. Until we find an OH example of the simple verb, a final choice between \**ušnā(i)-* and \**ušne-/ušna-* cannot be made.

There is probably also one more iterative-causative in \**-eye-* in Hittite, although for phonological reasons it shows a different inflection from that of *wašše-* and *lukke-*. Oettinger, *Stammbild.* 63 f, places *lā-* 'release, let go' in a class with *dā-* 'take'. However, a look at the forms of *lā-* (ibid. 66) shows that it does not inflect at all like *dā-*. Most forms of *lā-* point clearly to the *mi-*conjugation. The only *ḫi-*conjugation forms are 3rd sg. *lāi* and *lāu*, which need not be original: cf. 3rd sg. *ḫandāi* for *ḫandāizzi*. The 3rd sg. *laizzi* (*KBo* XVII 105 III 21) is, contra Oettinger, in a MH manuscript (see *CHD* 3/1 (1980) 1) and thus as early as the first instance of *lāi*. The conjugation of *lā-* most resembles that of the denominatives in *-ā(i)-*. This suggests that the stem should be set up as *lā(i)-* and should be derived via the loss of intervocalic \**y* like the *ḫandā(i)-* class. Since except for *pāi-* 'go', *lā(i)-* would have

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[75] I have collected the following examples: *anniške-* (*KBo* VI 2 I 18), *[kukkur]iške-* (ibid. IV 45), *[ētr]iške-* (ibid. IV 59), *zaḫḫiške-* (*KBo* XVII 36 II 7), *pišiške-* (ibid. III 8). There is also one example of an uncontracted form: *šiēške-* (*KBo* XVII 44,6).

[76] One also finds uncontracted *aruwāiške-* (*KBo* XVII 30 II 9).

[77] As indicated by Oettinger, *Stammbild.* 352 f, the stem *ḫappar(i)ya-* beside *ḫapparā(i)-* does not represent a replacement of a stem in *-ā(i)-* by one in *-(i)ya-*, but rather a different denominative formation, probably with a different sense: *ḫappar(i)ya-* 'hand over, entrust', *ḫapparā(i)-* 'sell'.

been the only monosyllabic stem in -*āi-*, it would have been even more open to the influence of the *ḫi*-conjugation 3rd singulars in -*āi: dāi, pāi, nāi,* etc. Oettinger takes *lā-* as an old root aorist, but admits, *Stammbild.* 501, that it is hard to motivate its analogical reshaping after *dā-*. We would in fact expect from a root *\*leh₁-* only forms in -*ē-:* *\*lēmi,* *\*lēši,* *\*lēzzi,* etc. (cf. *tēmi* < *\*dheh₁-mi*). If we assume that the root *\*leh₁-* had an *i*-enlargement in Hittite (like many roots in *\*-eh₁-*), then its conjugation should be like that of the others: *\*lēḫḫi,* *\*lētti, lāi,* *\*liyanzi* (cf. *teḫḫi* < *\*dheh₁i-h₂ei*). As already noted, the attested inflection of *lā(i)-* points to loss of intervocalic *\*y*. I therefore suggest it is derived from an iterative-causative *\*loh₁éye/o-*. Loss of intervocalic *\*h₁* and *\*y* would produce *\*la-ē-* and *\*la-a-*, which would almost certainly lead to the attested *lāi-/lā-*.

### 2.2.2 Sequences of *\*ăyV*

There is one clear case of *\*ayV*, already cited above: *a-a-ri, a-a-an-ta* 'is, are warm' from *\*ayori,* *\*ayonto*. The root is *\*ai-* 'be hot' also seen in Hitt. *inu-* 'make warm'.[78]

The verb shows consistent scriptio plena, indicating hiatus: /a-ari/, /a-anta/. There is no way to be sure whether the accent is on the root or the stem-vowel, since Hittite has both types: *nēa(ri)* < *\*néih₁-o(ri)* and *tuqqāri* < *\*tuk-óri*. Perhaps the full-grade *\*ai-* of the root points to *\*áy-ori*. The spelling is ambiguous.

There is one other likely case of *\*ayV*. Oettinger, *Stammbild.* 363, derives *šā(i)-* 'be angry (at)' from *\*seh₂-ye-*, relating the word to the family of Lat. *saeuus* 'fierce, raging', following Juret. The root connection is undoubtedly correct, but Oettinger has forgotten his own cogent arguments (see immediately below) showing that a sequence *\*eh₂ye/o* leads to Hitt. -*āye-/-āya-*. Since the attested weak stem of *šā(i)-* is always *šā-*, never *\*šāya-*, the preform *\*seh₂-ye/o-* is impossible.

Pokorny, *IEW* 877, lists the root as *\*sāi-*, but all the reflexes he lists could just as well be from *\*sai-*. The *\*ai* vocalism would also be apt for the sense: cf. *\*aig-* 'be sick', *\*kaiko-* 'one-eyed, blind', etc. It is likely that a stem *\*say-e-*, *\*say-o-* would lead to attested *šāi-, šā-* (for *\*a-ĕ* > *āi* see note 141). As I have argued at length above, 1.2.1, there is no good evidence for simple thematic presents in Hittite. However, an

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[78] This verb is often given as *enu-*, but the OH occurrences show consistently *i-*. Since we expect zero-grade of the root in a *nu*-verb, and zero-grade of this root is attested elsewhere (Skt. *inddhé* 'kindles' < *\*i-n-dh-tói*), it is preferable to read /inu-/ < *\*i-neu-* rather than /enu-/ <*\*ai-neu-*.

athematic pre-Hittite *say-ti, *say-anti would have been entirely isolated. It does not seem unreasonable that it might have been remodeled after the numerous verbs in -ye-/-ya- to *sayeti, *sayanti, which would then lead to the attested šāi-/šā-.

The sequences *āye/āyo are reflected in the denominative verbs conventionally listed in Hittite as -āi- stems. The direct relation of this class to denominatives in -aḫḫ- is indisputable, pace Oettinger, Stammbild. 357. See such pairs as armaḫḫ-/armā(i)- 'become pregnant', kutruwaḫḫ-/kutruwā(i)- 'call to witness'. Nevertheless, Oettinger's objection to direct derivation of -ā(i)- from *-eh₂-yé/ó- must be upheld. If one is, for example, to derive OH tarmaezzi, tarmānzi 'fasten(s) down' from *tṛmeh₂-yéti, tṛmeh₂-yónti, one must first assume loss of the laryngeal before *y (with compensatory lengthening), giving *tarmāyezzi, *tarmāyanzi. Loss of intervocalic *y then produces OH tarmaezzi, tarmānzi (almost certainly /tarmā-etsi/, /tarmā-antsi/ with hiatus in both forms). Later ā-e contracts to a diphthong āi, and the plural probably also contracts to /tarmāntsi/.[79]

The problem, as Oettinger points out, is the verb tāye-/tāya- 'steal'.[80] This verb must be reconstructed either as *(s)teh₂yéti, *(s)teh₂yónti (Oettinger) or as *(s)toh₂yéyeti (Jasanoff, MSS 37 (1978) 91–92). In either case, if one assumes the same loss of *h₂ before *y, and then loss of intervocalic *y, one must unavoidably predict OH */tā-etsi/, */tā-antsi/ just like /tarmā-etsi/, /tarmā-antsi/. The stem tāye-/tāya- argues that the loss of *h₂ before *y in Hittite took place after the loss of intervocalic *y.[81]

This means that another explanation for the form of the stems in -ā(i)- must be found. Oettinger, Stammbild. 357–358, proposes to aban-

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[79] The transfer of the verbs in -uwe-/-uwa- and statives in -e-/-a- to the -ā(i)- class in Neo-Hittite is easier to motivate if one assumes an allomorphy -āi-: -ā- (not ā-a) for the latter: see 2.2.1.

[80] Oettinger, Stammbild. 357, also considers šakuwaye- 'ogle, look at' as evidence for a *sōkʷeh₂yé- with the same phonological treatment, but šakuwaye- 'ogle' is derivable from synchronic šakuwa- 'eye(s)' with denominative -ye- at any time during the prehistory of Hittite, after the loss of intervocalic *y. The consistent lack of scriptio plena (always -aye-, never -āye-) in fact supports this explanation. Forms such as šakuwān without -y-, attributed to this verb by Oettinger, Stammbild. 394, cannot belong here. OH šuwāye- 'look at' points to *sweh₂-ye- (Oettinger, Stammbild. 396), but the PIE source is unknown.

[81] This explanation in terms of rule ordering (loss of *h₂ before *y only after loss of intervocalic *y) seems simpler than Oettinger's assumption of an assimilation of *h₂ to *y, producing a double -yy- which does not undergo deletion. One hardly expects both compensatory lengthening of the preceding vowel and gemination of the following glide.

don the connection with *-aḫḫ-* < *-eh₂-* and to derive the *-ā(i)-* stems from thematic stems plus denominative *-yé-/-yó-:* thus *-o-yé-/-o-yó* > *-aye-/-aya-* > *-ae-/-aa-* (with hiatus) and eventually *-ai-/-ā-*.

In addition to flying in the face of the clear connection of *-aḫḫ-* and *-ā(i)-,* this explanation faces two more difficulties. Oettinger must assume that Hittite forms denominatives in *-yé-/-yó-* from the *o*-grade of thematic stems, but *duwarni-/duwarna-* 'break' shows that Hittite uses the *e*-grade just like Sanskrit and Greek (see 2.2.1 above). Furthermore, the stems in *-ā(i)-* show a strong preference for plene writing of the *a,* suggesting a long /ā/ < *-eh₂-* with loss of *h₂* and compensatory lengthening. Compare the same plene spelling in *tāye-,* where the *h₂* is certain.[82]

Therefore we must choose the solution offered by Watkins, *Flexion und Wortbild.* 371 f, which Oettinger, *Stammbild.* 357, note 208, endorses as an alternative, without seeming to realize that it is substantively different from his own solution. After citing the direct derivation from *-eh₂-ye/o-* (which we have seen cannot be correct), Watkins suggests an alternative. Since the collective noun in *-eh₂-* which is the base of *-eh₂-yé/ó-* loses its word-final *h₂* in Common Luvo-Hittite, becoming (originally) *-ā,* the derivation of the corresponding verbs could have been renewed as well: noun *-eh₂-* → verb *-eh₂-yé-* replaced by noun *-ā* → verb *-ā-yé-*. From original *āye/āyo* the loss of intervocalic *y* produces regularly both the Hittite and Luvian forms, which share an alternation *-āi-* (< *-ā-e-*) versus *-ā-* (< *-ā-a-*).[83]

## 2.2.3 Sequences of *uyV

The clearest case of loss of *y* after *u* is in the present third plural of *uwa-* 'come', a verb whose entire paradigm calls for discussion. The original inflection of this verb in Anatolian is clear: *auh₁eimi, *auh₁eisi, *auh₁eiti, *auh₁iweni, *auh₁eiteni, *auh₁yenti (for the preverb as *au-

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[82] The plene spelling of the *-ā-* is by far the commoner in *tāye-:* 69 × vs. 29 × without in my files. For *ā* < *-eh₂-* elsewhere in Hittite compare the collective nouns in *-āwar* (4.1.2) and abstracts in *-ātar* < *-eh₂-tṛ.* In absolute final position this *ā* is shortened to *a.* That loss of *h₂* originally caused compensatory lengthening in this position too is confirmed by OH *āššū* 'goods', a collective in *-uh₂:* see Watkins, *Indo-European Studies IV* (1981) 263 f (to appear in *Gedenkschrift H. Kronasser*).

[83] Watkins, loc. cit., also derives Palaic verbs in *-a-a-/-a-ga-* from *-āye-/-āyo-*. However, the complete lack of an allomorph *-āi-* reflecting *-āye-* is surprising. It seems more plausible to join Oettinger, *Stammbild.* 559, in equating the Palaic type to Hitt. *-aḫḫ-* < *-eh₂-*. The weakening of *h₂* to *-g-/-* in Palaic was probably regular before consonantal endings like third singular *-ti,* from which it could have been generalized.

see 4.1.1). If one assumes that the monophthongization of *$au$ to $u$ (4.1.1) took place before loss of *$h_1$ between vowels, the strong stem *$auh_1ei$- would have become in the first instance *$u$-$ẹ$- with hiatus: for the change *$ei$ to $ẹ$ before loss of *$h_1$ see 4.2.2. Luvian initial $aw$- in $awi$- 'come' must in this case be a renewal of prevocalic $aw$- after the loss of *$h_1$ (thus Oettinger, *Stammbild.* 133–134).[84] Alternatively, if one assumes that *$h_1$ was lost before *$au > u$, then the Luvian is regular, and Hittite *$u$-$ẹ$- 'come' shows generalization of the preconsonantal result of *$au$- as a preverb (all other analyzable cases of preverb $u$- are before a consonant-: $unna$-, $uppa$-, $uššiya$-, $uda$-, $u(i)ya$-). In either case we are left with initial *$u$-$ẹ$-. The same two possibilities exist for $wemi$-$ya$- 'find': *$au$-$h_1em$- > *$uh_1em$- > *$u$-$em$- or *$u$-$em$- directly after $u$-$nna$- etc. The verb $wemiya$- suggests that initial *$u$-$e$- (unlike internal *$u$-$e$-) does not become $uwe$-, but simply $we$-. This is confirmed by OH $ú$-$e$-$ez$-$zi$ /wẹtsi/ 'comes' < *$u$-$ẹti$ and also pret. 3rd sg. $ú$-$e$-$et$ /wẹt/ < *$u$-$ẹt$ (compare also OH $yanzi$ 'they make' < *$i$-$enti$ in 1.2.2).[85] The form /wẹtsi/ remains the third singular form throughout the history of Hittite. Only a couple of times is the analogical /uwatsi/ attested. The old second plural /wẹteni/ < *$u$-$ẹteni$ may be indirectly attested in the imperative $ú$-$it$-$te$-$en$ /wẹten/ at *KBo* III 41 Vs 22 (with preservation of

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[84] This statement is based on the plausible, but not absolutely proven, assumption that the monophthongization of the $u$-diphthongs and the loss of intervocalic *$h_1$ are Common Anatolian (at least Common Luvo-Hittite). One could also suppose that the sequence *$auh_1V$ was preserved into Luvian (cf. note 38). Independent loss of *$h_1$ in Luvian would lead regularly to $awi$-.

[85] I am well aware that I am claiming a different treatment for word-initial sequences *$u$-$V$ and *$i$-$V$ *(wV-, yV-)* from that assumed for internal position *(uwV, iyV)*, as well as a different result for initial *$u$-$V$ < *$uh_1V$ from that for initial *$u$-$V$ < *$uyV$ (see $uwanzi$ immediately below). The first opposition is demanded by the attested results of *$auh_1eiti$ > /wẹtsi/ and *$ih_1enti$ > /yantsi/, whose preforms are well founded and entirely independently motivated. Nor does such a different result of *$u$-$V$ and *$i$-$V$ according to position in the word seem to me phonetically implausible. On the other hand, the assumption of phonologically different results from initial *$u$-$V$ < *$uh_1V$ and initial *$u$-$V$ < *$uyV$ does seem ad hoc (the fact that the hiatus is caused by different deletions at different times hardly seems sufficient to explain the difference). Since the loss of intervocalic *$y$ which produces third plural *$u$-$anzi$ simultaneously produces also third plural *$ḫu$-$anzi$, *$kappu$-$anzi$, *$šarku$-$anzi$, etc. (see 2.1.5 and further below in this section), I would assume rather that the result $uwanzi$ with $w$-insertion is analogical after the other third plurals $ḫuwanzi$, $kappuwanzi$, $šarkuwanzi$, etc., where the treatment *$u$-$V > uwV$ is regular in word-internal position.

The reading of $ú$-$e$-$ez$-$zi$ and $ú$-$e$-$et$ as /wẹtsi/ and /wẹt/ with initial /w-/ instead of /u(w)ẹtsi/ with initial /u-/ is required by the spelling with the sign $ú$ before a vowel: see notes 22 and 31.

the old full grade in a imperative; see Watkins, *Idg. Gram.* III/1. 32 ff).
Unfortunately, this form occurs in a NH copy (beside /uwaten/), so its
authenticity is questionable.

With loss of *$h_1$ and then intervocalic *$y$, the third plural *$auh_1yenti$
becomes /u-antsi/ and the hiatus is filled by *$w$: /uwantsi/ (see 2.1.5
and note 85). The stem form /uwa-/ spread to the rest of the plural
and then to the first and second singular (for the latter compare the
spread of *ya* at the expense of *ye*). As Oettinger correctly points out,
OH 3rd pl. *ú-en-zi* /wẹntsi/ is analogical after the 3rd sg., just like *i-
en-zi* /yentsi/ after *i-e-ez-zi* /yetsi/ (1.2.2).[86]

Additional examples of *$uyV$ to *$u$-$V$ to $uwV$ are found in deno-
minative verbs in *-*yé*-/-*yó*- from *u*-stems. This type, proposed by Oet-
tinger, *Stammbild.* 330 ff, definitely exists, but several cases are ambi-
guous, and he includes at least one verb which does not belong here.

The clearest case morphologically is *šarkuwe-/šǎrkuwa-* 'put on
shoes'. It is questionable whether this verb may be derived from *šarku-*
'high' via *'high shoe' (Neumann apud Oettinger, *Stammbild.* 335, note
159), but derivation from a noun stem *$sarku$- seems unavoidable. The
loss of intervocalic *$y$ in *$sarku$-*yé*-/$sarku$-*yó*- and insertion of *w* into
the hiatus produce a synchronic thematic verb *šarkuwe-/šarkuwa-* as
per Oettinger. The verb *kappuwe-/kappuwa-* 'count' also clearly is de-
rived with *-*yé*-/-*yó*- from a noun or adjective *$kappu$-. The OH third
plural *kappuwenzi* is analogical after the singular *kappuwezzi*, like
*wenzi* after *wetsi*. As Oettinger stresses, in later Hittite this class under-
goes considerable reworking. The most common development is a shift
into the much more numerous class of denominatives in -*ā(i)*- (2.2.2):
thus NH *kappuwāizzi*, etc.

Based on the third plural preterite forms *šakruwer* and *šaruwer*, Oet-
tinger's positing of *šakruwe-/šakruwa-* 'water' and *šaruwe-/šaruwa-*
'plunder' (instead of *šaruwā(i)*-) also seems secure. Other cases such as
*parkuwe-* 'purify' and *ḫaššuwe-* 'be king' are likely on the basis of their
formation and meaning. A few verbs are too sparsely attested to be sure
of their inclusion here.

One verb included by Oettinger in this class definitely does not be-
long here: his alleged *$ḫuešuwe$- 'be alive' < *ḫuešu-* 'raw' via *$h_2wesu$-
*yé*-. We have here rather a stative in *-*eh_1*-: *ḫuešwe-* /hweswe-/ <

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[86] The spelling of /uwa-/ as *ú-wa-* instead of *u-wa-* is permitted by the fact that *wa* is
a CV̌ sign: see note 31 end. The reading of *ú-wa-* 'come' as /uwa-/ (not /wa-/) is de-
manded by the complete lack of any alternate spellings with initial *wa-*.

*$h_2wesw$-$eh_1$-, as described by Watkins, *TPS* (1971) 93 (see 2.2.1 above for further discussion). One example of *ḫuešwe*- 'be alive' can only be explained from a stative in *-$eh_1$-, not from a denominative in *-$uyé$-/-$uyó$-. Oettinger, *Stammbild.* 330, gives the preform of the preterite second plural ending as *-$uyeten$. He does this in order to explain the attested preterite second plural *ḫuišweten*, but this step is egregiously ad hoc. To my knowledge there is not a single instance of *e*-grade in the second plural of a *ya*-stem in all of Hittite, and Oettinger himself states explicitly, *Stammbild.* 344, that the *o*-grade in *-$ye$-/-$yo$- stems moved into the active second plural in prehistoric times! Therefore the second plural of a denominative in *-$u$-$yé$-/-$u$-$yó$- could likewise only be -*uwa*- < *-$u$-$yo$- (and only this attested in *kappuwaten*, etc.). On the other hand, of course, *ḫuišweten* is perfectly regular from a denominative stative *$h_2wesw$-$eh_1$-$ten$.[87]

As already noted by Oettinger, *Stammbild.* 338, original *$uye$ also regularly becomes *$u$-$e$ and then *uwe* in the inflection of adjectives in -*wi* (from original feminines in *-$wih_2$). For the most part, these adjectives have transferred to the proterokinetic inflection of regular *i*-stems: nom. sg. *warḫuiš* /warhwis/, gen. sg. *warḫuwayaš* /warhwayas/, nom. pl. *parkuwaēš* /barkwa-ēs/ after *šalliš, šallayaš, šallaēš* (2.2.4). However, there are also nominative plurals like *par-ku-(u)-e-eš* /barkuwēs/ < *$barkuyēs$.[88] One also finds examples with the *y* restored after the rest of the paradigm: *par-ku-i-e-e-š* /barkuyēs/. The latter type leads finally to a handful of backformations after the old *-$yo$- stems, which fall together with the *i*-stems in Neo-Hittite: as *appizziš: parkuiš* and *appizziyeš: parkuyeš* so also gen. sg. *appizziyaš:* x (→ *parkuyaš*).

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[87] Oettinger is certainly justified in claiming that some of Watkins' examples of *e*-statives are ambiguous or problematic: *ḫaššu(w)e*- and *parku(w)e*- have already been cited. Furthermore, the OH forms *ku-u-ru-RI-e-et* and *ku-u-ru-RI-e-er* may be read with Oettinger as /kurur(i)yet/ and /kurur(i)yer/ just as easily as /kururet/ and /kururer/. Since the verb *wantā(i)*- 'be hot' is attested only in this form and never in OH manuscripts, it may reflect an older stative *$wante$- < *$wanteh_1$- or an original denominative in -$ā(i)$-. Nevertheless, *ḫuišwe*- must be an *e*-stative, and many of Watkins' other examples are supported by parallel stems in -*ešš*- (see the full discussion in 2.2.1).

[88] The form /barkuyēs/ is the result of the synchronic stem *$barkwi$- plus nom. pl. ending -*ēš*, which forces the different syllabification of the stem. The stem in -*wi*- is regular in the nom. sg. < *-$wih_2$ (with loss of *$h_2$ in word-final position: see note 82). If the acc. sg. ending */ih_2m/ was already phonetically *[īm] in PIE, then Hitt. acc. sg. -*wi*-*n* would also be regular: see Hollifield, *Sprache* 26 (1980) 53, and the discussion of Hitt. *tuwān* /dwān/ in 2.1.5. For the generalization of the stem -*wi*- compare the stem *ḫašša*- 'hearth' < *$h_2eh_xseh_2$-.

### 2.2.4 Sequences of *$oyV$

Examples for the development of this sequence are furnished by forms of the numerals 'one' and 'two'. Eichner, 'Die Anatolischen Zahlwörter' (ms) p. 9, points out the parallelism of l-*anki* and *a-an-ki* 'one time' in *KUB* IV 2 IV 36 ff and deduces a stem *$a-a-$ for 'one' in Hittite. As he indicates, the plene spelling suggests a long vowel by contraction (or alternatively /a-a-/ with hiatus), and he reconstructs either *$oi-yo-$ or *$oy-o$. Hittite thus shows yet another extension of the PIE base *$oi-$: cf. *$oi-ko-$ (Skt. *éka-*), *$oi-no-$ (Lat. *ūnus* etc.), *$oi-wo-$ (Av. *āeva-* etc.). Since tautosyllabic *$i$ forms a diphthong in Hittite (see 4.2.1), we must opt for Eichner's second alternative *$oy-o-$.[89]

Eichner, p. 22, and independently Puhvel, *KZ* 92 (1978) 99 ff, both derive the Hittite adverb *dān* 'twice, secondly' from a neuter nom.-acc. sg. *$dwoyom$.[90] For the stem compare Skt. *dvayá-* 'double'. This derivation, which is regular with loss of intervocalic *$y$, accounts better for the syntax of *dān* in its various uses than a direct derivation from the cardinal *$dwō$, where the ending of *dān* would also require special explanation.

The sequence *$oyV$ is also attested in the oblique stems of *i*-stem adjectives. The *i*-stem adjectives in Hittite inflect entirely parallel to the *u*-stems (whether this is inherited or not may be left open). This means an original proterokinetic inflection: e.g., anim. nom. sg. *$sélh_2-i-s$, gen. sg. *$sl̥h_2-éi-s$, dat. sg. *$sl̥h_2-éy-ei$, etc. (cf. the *u*-stems in 2.1.2). With the replacement of the gen. sg. ending -*s* by -*as* in Hittite, the preform *$sl̥h_2-éy-as$ could lead regularly to *šallaš*: *-*eyas* > *-*e-as* (with hiatus) > -*as* (see 2.2.1).[91] Likewise, dat. sg. *$sl̥h_2éy-ei$ could give *-*eye̜* > *-*e-e̜* > -*āi*: cf. *$dhéh_1y-ei$ > *$deye̜$ > *$de-e̜$ > *dāi* 'puts' (4.2.2).

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[89] Eichner also explains HLuv. *nala-* 'no one' from a virtual *$ne-oy-o-lo-$, which is not implausible. The hiatus or long vowel from contraction would hardly be reflected by HLuv. orthography. Likewise, $^E$*ḫištā-* < *$h_2ēstoyo-$ 'of bone' may show *ā* < *$oyo$: see Hoffmann apud Eichner, *MSS* 31.72.

[90] Eichner, who credits W. Cowgill with the reconstruction *$dwoyom$, alters this to *$doyom$, comparing Grk. *doiós*. However, there is other evidence for *$w > \emptyset$ between a dental stop and *$o$ in Hittite (3.1.2), so *$dwoyó-$ is to be preferred. The Greek could also reflect *$dw-$, and the preserved intervocalic *y* makes its derivation problematic in any case.

[91] When I say 'regularly', I mean in terms of the vocalism. Oettinger, *Stammbild.* 549, proposes that *$V́Rh_2V > VRRV$ while *$VRh_2V́ > VRḫV$. This is falsified by cases like *ḫullanzi* < *$h_2ulh_2énti$ < *$h_2wl̥h_2énti$ (see note 33), where the pre-Hittite accent was certainly on the following syllable, and there is no evidence that it ever changed. The difference between *$VRRV$* and *$VRḫV$* may be better accounted for by assuming a general rule *$VRh_xV > VRRV$ which operated before the change *$R̥ > aR$ (personal communication

However, nom. pl. *$sḷh_2éy$-es and acc. pl. *$sḷh_2éy$-us could not pro-
duce attested *šallaeš* and *šallauš*. We would expect rather *$šallēš$ (see
2.2.1) and *$šalluš$ (with secondary *$e$-$u$ > $u$ like original *$eu$; see 4.1.1).
The attested *šallaeš, šallauš* may be analyzed as simply analogical after
the *u*-stems (before loss of intervocalic *$y$): *$sallay$-es, *$sallay$-us in-
stead of *$salleyes$, *$salleyus$ after *pargawes*, *$pargawus$. The late oblique
forms of *i*-stem adjectives such as *šallayaš* and *šallayaz* must be analogi-
cal after the *u*-stems (*pargawaš* and *pargawaz*) after loss of intervocalic
*$y$ within the historical period.

Alternatively, there is some evidence for an *o*-grade variant *-*ois* in
the gen. sg. of *i*-stems: cf. Goth. *-ais*. With the renewal of *-s* by *-as* in
Hittite, *-*ois* (> *-*ais*) would have become regularly *-ayas*, from which
the stem *-ay-* could have spread like *-aw-* in the *u*-stems (see 2.1.2).

Whether the replacement of *-*ey-* by *-ay-* originated in the gen. sg.
or was after *-aw-* in the *u*-stems, loss of intervocalic *$y$ led to *šallaeš,
šallauš* and also to OH gen. sg. *šallaš*, dat.-loc. pl. *palḫaš*, nt. nom.-acc.
pl. *šalla, šuppa, palḫa,* etc.[92] As just mentioned, the *y* was later restored
in the latter cases after the *-awa-* forms of the *u*-stems. There is one ap-
parent difficulty with deriving forms like *šallaš* from *$šallayaš$. Based
on *ānki* and *dān*, we would expect *$a$-$a$ to contract to a long *ā*. I know
of no examples of scriptio plena in these contracted *a*-forms. On the
other hand, this may mean nothing, since examples from OH manu-
scripts are very rare (I can cite only dat.-loc. pl. $^{DUG}$*palḫaš* in *KBo* XX 3
Rs 4). One could still read these examples with *-ā-:* /sallās/, /palhās/,
etc. As indicated above (note 91), the stem has been leveled in most *i*-
stem adjectives after the strong cases: *$sḷh_2áyas$ > *$salháyas$ replaced by
*$sállayas$. It cannot be excluded that the retraction of the accent in the
oblique cases shortened the *$ā$ resulting from contraction to *ă*.

## 2.2.5 Secondary intervocalic *y*

The arguments just presented for the general loss of intervocalic *$y$
raise the question of the origin of attested intervocalic *y* in Hittite. The
general answer is that the loss of intervocalic *$y$ is pre-Hittite (prob-
ably Common Luvo-Hittite), necessarily preceding the loss of *$h_2$ be-

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of J. Schindler). Thus regularly *$sélh_2i$- > *šálli-*, but *$sḷh_2$-éi- > *$šalḫéy$-. In most cases the
oblique stem is leveled after the strong stem: thus uniform *šall-*. In *palḫi-* 'broad' the
leveling is in the opposite direction: regularly *$pélh_2i$- > *pálli-*, but *$pḷh_2éi$- > *$palḫéy$-,
whence uniform *palḫ-* (whether or not *palḫi-* retained the oblique-stem accent (*palḫí-, pal-
ḫáy-*) is hard to determine).

[92] See Excursus VI.

fore $y$ (see the discussion of the $-\bar{a}(i)$- verbs in 2.2.2). Therefore any $y$ which came to be intervocalic after that time is preserved. In other cases intervocalic $y$ is restored/preserved analogically.

Thus in the univerbations *u-ya-* and *pe-ya-* 'her-/hinschicken', the intervocalic $y$ remains (even if these were old, the fact that they remain synchronically segmentable would surely have led to preservation of the $y$). So also in *tāye-* 'steal' and *šakuwaye-* 'ogle' the intervocalic position of the $y$ is secondary: see 2.2.2 with note 80. The compound *tāyuga-* 'two years old' is spelled consistently with $y$ in OH manuscripts of the Laws and also seven times out of nine in the later copies. The hapax *ta-a-u-ga-aš* is thus likely an error like hapax *da-a-i-ga-aš*, not an old form with loss of $*y$. Once again this word could be either a new Hittite formation or an old form with the $y$ preserved in a transparent compound.

As discussed above, the regular outcome of the third plural of *ḫuwāi-* 'run' is attested: *ḫuwanzi* /huwantsi/ $<$ $*h_2uh_1yénti$ (loss of $*h_1$ then of $*y$, and insertion of $w$ into the hiatus). The more frequent form is *ḫu(i)yanzi* /huyantsi/ with intervocalic $y$ restored on the model of other verbs in this class: *išpāi: išp(i)yanzi, šāi: š(i)yanzi*, etc. Oettinger, *Stammbild.* 471, derives *mayant-* 'grown (man)' from $*moih_1ént$-, but the tautosyllabic $i$ would have formed a diphthong and led to $*mēant$- (see immediately below). Hittite *mayant-* is merely an *-ant-* extension to the stem $*maya$- 'grown man', attested in the nom. pl. *maeš* and dat.-loc. pl. *mayaš*. The latter is most likely from $*móh_1$-*o*-, originally an action noun 'growing', then a result noun 'that which has grown'. Compare for the formation and meaning Hitt. *ḫaššaš* 'child, offspring' and Grk. *gónos* 'begetting' and also 'offspring'. A stem $*móh_1y$-*o*- would have led regularly to $*ma$-*a*-, but a nom. pl. $*moh_1y$-*es* would have given regularly the attested *maeš*, and a proportion *šallaeš: maeš :: šallayaš:* x would produce *mayaš*. The association with forms like *miyant-* 'grown', participle of *māi-* 'grow', would have also favored retention/restoration of the $y$ in *maya-* and *mayant-*.[93]

In Old Hittite the sequence *e-a* (phonetically *ẹ-a*) resulting from the monophthongization of an *i*-diphthong and then loss of $*h_1$ remains with hiatus: $*néih_1$-*o* $>$ *nēa* /nẹ-a/ 'turns', $*séih_1$-*o* $>$ *zēa* /tsẹ-a/ 'is (cooked) done' (see further 4.2.1 below). Later this hiatus is filled by insertion of a $y$: cf. OH *nēa* (*KBo* XVII 43 I 12) and *nea* (*KUB* XXXVIII 223 Vs 2) with MH *nēya* (*KUB* VIII 81 II 7). Likewise, the OH paradigm of *utnē* 'land' is nom.-acc. *utnē*, obl. *utn(i)y-*: see Neu,

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[93] See Excursus VII.

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*StBoT* 18 (1974) 109 ff. For the prehistory of this word see 4.2.2 below. Later the paradigm was leveled after the nom.-acc., producing an oblique stem *utnē,* originally with hiatus: gen. sg. *utneaš* etc. Again this hiatus is eventually filled: gen. sg. *utneyaš,* etc. The same development is seen in the word for 'rain': *ḫēu-.* Compare *ḫeawes̆* with hiatus in the OH manuscript *KUB* XXIX 3,8 with *ḫēyawes̆* in the NH copy *KUB* XXIX 1 I 27. This points to a preform $*h_{2/3}eih_1$-*u-* for *ḫeu-.*[94]

## 2.2.6 Orthography of intervocalic *y*

It is generally held that the Hittites are inconsistent in their spelling of intervocalic glides, and the 'non-writing' of glides has been used as a criterion in dating texts: see e.g. Neu-Rüster, *StBoT* 21 (1975) 10. Most of these cases turn out to involve specifically the sequences *-i(y)V-* and *-u(w)V-,* which will be discussed in detail in Section 3. Most other alleged cases of 'non-writing' of intervocalic *y* do not exist. We have seen that the difference between *nēa* and *nēya* is not a matter of optional indication of the glide. The different spellings reflect phonologically different forms from two synchronic systems: older /nẹ-a/ and later /nẹya/. Similarly, *par-ku-(u)-e-eš* and *par-ku-i-e-eš* may also be reasonably taken as phonologically different forms /barkuwēs/ and /barkuyēs/. Once again, we are not dealing with 'non-writing' of *y* in the former: there is no *y* in the word.

The writing of intervocalic *y* is actually quite consistent and entirely parallel to that of *w*. Before *e* and *u*, intervocalic *y* is written necessarily with *i*. Since all cases of intervocalic *y* are secondary, there are not many examples: *t/da-a-i-e-* for /tāye-/ 'steal', *u-i-e-ez-zi* for /uyetsi/ 'sends', *ta-a-i-u-ga-* for /dāyuga-/ 'two years old', *par-ku-i-e-eš* for /barkuyēs/ 'pure', late *ḫe-i-ú-un* for /ḫeyun/ 'rain'. Genuine examples of nonwriting of *y* are extremely rare, if they exist at all. I can cite only *u-e-ez-zi* 'sends' at *KUB* XXXI 42 II 11. Even this example is uncertain, since it cannot be excluded that we have a genuine /uwe-/ with regular loss of intervocalic *\*y* versus the usual /uye-/ (see 2.2.5).

Examples of intervocalic *y* before *a* are more frequent, due to the number of nominal and verbal endings with initial *-a-*. Here we have three possible spellings *-ya-, -i-a-* and the conflated *-i-ya-* (cf. 1.2.4 and 2.1.6). The use of *-i-a-* is rare (as in initial position), but attested: *ta-i-az-zi-la-an-ni* /tāyatsilanni/ at *KUB* XIII 9 II 11 and *ma-a-i-an* /mayan/ at *KUB* XXXIV 11, 11. To my knowledge only *-ya-* is attested in OH manuscripts, to be replaced by conflated *-i-ya-* later. For exam-

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[94] See Excursus VIII.

ple, in Old Hittite the weak stem of *ḫuwāi-* 'run' is always *ḫu-(u)-ya-* (at least 6 × in OH mss.). In Neo-Hittite historical texts this spelling is attested only once in the Deeds of Suppiluliuma (*KBo* V 6 II 34). Otherwise, the Neo-Hittite spelling is *ḫu-i-ya-*. Likewise, in Neo-Hittite one finds only *u-i-ya-* for /uya-/ 'send'. Compare also *ta-(a)-ya-az-zi* 'steals' in the OH manuscript of the Laws (*KUB* XXIX 28,12) and the MH copy (*KBo* VI 3 III 26) with *t/da-a-i-ya-zi* in the NH copies.

## 3.1 Postconsonantal prevocalic *\*w*

### 3.1.1 Preserved sequences of *\*CwV*

PIE *\*w* is generally preserved in Hittite after a consonant and before a vowel. This is, of course, the 'Sievers' position for a PIE sonant, where we might expect a difference between *CuwV* after a heavy syllable and *CwV* after a light syllable. The possibility of a distinction between *CuwV* and *CwV* in Hittite was discussed in detail by Trager and Sturtevant, *Lg* 18 (1942) 259 ff. However, at that time little was known about the relative chronology of Hittite texts and manuscripts, and no firm conclusions could be drawn from the apparent bewildering variety of spellings. In principle, Hittite orthography could unambiguously indicate such a distinction. A sequence /CV(C)CwV/ may be spelled *CV-(VC)-Cu-V,* while /CV(C)CuwV/ may be indicated by *CV-(VC)-Cu-u/ú-V*. A close examination of the orthography of Old Hittite manuscripts shows that such a distinction is actually attested.

The received interpretation of OH spellings such as *mar-nu-an* (a drink) and *ša-aš-nu-an-zi* 'they cause to sleep' has been /marnuwan/ and /sasnuwantsi/. That is, these are taken to have sequences of -*CuwV*-, as suggested by the later spellings of these stems as *mar-nu-wa-an* and *ša-aš-nu-wa-*. The 'non-indication' of the glide *w* in Old Hittite manuscripts has been cited by several scholars as an archaism useful in dating texts: see e.g. Neu, *StBoT* 12 (1970) 53.

If we scrutinize the alleged examples of 'non-indication' of the glide *w*, we find that they all involve the sequence -*CuwV*- (never -*CawV*-, -*CewV*-, -*CiwV*-). It is reasonable, of course, that the *w* could be omitted in the spelling just when preceded by *u*, since the latter could indicate its presence. However, it is highly suspicious that virtually all examples of 'non-indication' of *w* are specifically in the sequence -*Cuwa*- (never -*Cuwe*- or -*Cuwi*-). Here there is no linguistic basis for a difference in treatment. What has happened is that merely due to the exis-

tence of spellings in -*Cu-wa-* (which are only possible because of the existence of a sign -*wa-*), the spelling -*Cu-a(C)-* has been read as /Cuwa/, while -*Cu-e-* and -*Cu-i-* are read as /Cwe/ and /Cwi/. This is an entirely ad hoc and unjustified procedure.

Everyone to my knowledge interprets OH spellings such as *ta-ru-e-ni* 'we say' and *ša-lu-i-ni-it* 'with clay' as /tarweni/ and /salwinid/. Similarly *a-du/tu-e-ni* 'we eat' is /adweni/, *li-in-ku-en* 'we swore' /ling-wen/, *la-a-ḫu-i* 'pours' /lahwi/, *ḫal-ma-aš-šu-i-iz* 'throne' /halmasswits/ and *pa-aḫ-ḫu-e-ni* 'in the fire' /pahhweni/. It is important to note that initial /Cwe-/ and /Cwi-/ are also spelled consistently *Cu-e/i-* in OH manuscripts (never *Cu-u-e/i-!*): *ḫu-(e)ek-* 'conjure', *ḫu-i-nu-* 'cause to run', *ḫu-iš-* 'live', *ḫu-(e)-et-(ti)-* 'pull', *tu-ek-ka-* 'body', *ḫu-el-pí-* 'fresh'. On the other hand, genuine sequences of /Cuwe/ are indicated with the spelling -*Cu-u/ú-e-*: *kap-pu-u-en-zi* 'they count' /kapuwentsi/ and *šu-ú-ez-zi* 'he pushes' /suwetsi/ (see 2.2.3 and 1.2.1). Consistency therefore demands that the spellings of *u*-stem nouns and adjectives be read accordingly: GIŠ*e-er-ḫu-i, e-er-ḫu-it* = /erhwi/, /erhwid/; *šar-ru-i* = /sarrwi/, *[ᶠḪa-an-t]i-ta-aš-šu-i* = /Hantidasswi/, ᵈ*Te-li-pí-nu-i* = /Telibinwi/. If the OH scribe had meant /sarruwi/, he would have written *šar-ru-u/ú-i*, just like *šu-ú-ez-zi*.

Consistency likewise calls for a parallel interpretation of the parallel OH spellings in -*Cu-aC-*: *ḫa-at-ta-lu-aš* 'of the door-bolt' = /hatal-was/ (in this case confirmed by the alternate spelling *ḫa-at-tal-wa-aš*); *ú-el-lu-aš* 'of the meadow' = /wellwas/; *wa-at-ta-ru-aš* 'of the spring' = /watarwas/; *la-ḫu-a-an* 'poured' = /lahwan/; *ar-nu-an* '(re)moved' = /arnwan/; *mar-nu-an* (a drink) = /marnwan/; *ša-aš-nu-an-zi* 'they cause to sleep' = /sasnwantsi/; *Za-al-pu-aš, Za-al-pu-az* = /Zalpwas/, /Zalpwats/ etc. The OH spellings of /CwV/ as -*Cu-V(C)-* (both -*Cu-aC-* and -*Cu-e/i(C)-*) are perfectly parallel to the spelling of labiovelars: *a-ku-an-zi* 'they drink' = /agʷantsi/. Note finally that the Hittite scribes also had a clear device for indicating a genuine sequence /Cuwa/ where it occurs: /duwats/ 'from a distance' is spelled *tu-u-az* and *tu-u-wa-az* in OH manuscripts, and /nuwa/ 'still, yet' *nu-u-wa* (see 2.1.5 above).

There is, of course, an independent reason to read -*Cu-aC-* as /Cwa/. We have seen in 2.1.4 that old sequences of /CuwV/ are dissimilated to /CumV/, including /CuwV/ from Sievers and Lindeman variants. Therefore any inherited Sievers variants /CuwV/ in Hittite would appear as /CumV/. There would thus not be any old sequences of /CuwV/ in Hittite, and those which arise secondarily have been shown to be spelled -*Cu-u/ú-V-* (or -*Cu-u-wa-*) in Old Hittite manu-

scripts. Therefore spellings in -*Cu-aC-* must be read as /Cwa/, as already suggested by the parallel with -*Cu-e/i-,* which is /Cwe/, /Cwi/.[95]

The question then arises as to the origin of the spellings in -*Cu-wa-,* which are already OH. The answer to this has already been intimated above. The very existence of a sign -*wa-* (but no -*we-* and only belatedly -*wí-*) led to the disfavoring of spellings in -*Cu-a-* (NB: -*Cu-* plus the vowel sign -*a-,* not -*Cu-aC-*). Spellings such as *la-ḫu-a-an* /lahwan/ cited above are extremely rare, and a high percentage of OH spellings in -*Cu-wa-* are precisely in an environment where the absence of *wa* would have led to a sequence -*Cu-a-.* This is especially true of word-initial and word-final position, where I am not aware of any spellings in *Cu-a*: *ḫu-wa-a-i* 'runs' = /hwāi/, *tu-wa-a-an* 'here ... there' = /dwān/, *tu-wa-ar-na-* 'break' = /dwarna-/, *šu-wa-a-ru-* 'heavy' (?) = /swaru-/, *zu-wa-a-lu-wa-al* '?' = /tswalwal/, *Za-al-pu-wa* (absolute and directive) = /Zalpwa/.[96] Compare again the entirely parallel treatment of labiovelars: *ku-i-* 'who, which' = /k$^w$i-/, but *ku-wa-a-pí-ik-ki* = /k$^w$abiki/ (never *ku-a-°*). In the interior of a word, note the following: *pár-šu-wa-ni* 'we break' /parswani/, *[šu]-up-pí-iš-tu-wa-a-re-eš*

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[95] If we examine the cases cited here for /CwV/ in Old Hittite, we find that some of these are in positions where one would expect /CwV/ by Sievers: *lāḫui* < *léh$_x$wei* (see Jasanoff, *Heth. und Idg.* 88), *paḫḫueni* < *péh$_2$weni* (see Schindler, *BSL* 67 (1972) 38), *arnuan* and *marnuan* < *h$_1$ṛnwént-* and *mṛnwént-* (cf. Skt. ṛṇv- and śṛṇv-). In other instances the attested sequence /CwV/ has been secondarily created: *tarweni* < *tṛwéni*, *parš(u)wani* < *pṛs-w-*, *arwā(i)-* probably < *ṛwáye/o-,* *atueni* (with initial *a-* either analogical after *šeš-/-šaš-* or from *h$_1$-*). Other examples have environments where we would expect /CuwV/ by Sievers: *šašnuanzi* for *sasnuw-enti* (cf. Skt. aśnuv-), *welluaš* surely from *welh$_x$w-*, *šarrui* probably also *serh$_x$w-*, *linkuen* < *h$_1$lenghwen*. However, in the last three cases we are dealing with the generalization of a strong stem. The original weak stem would have conditioned rather /CwV/: *wḷh$_x$w-*, *sṛh$_x$w-*, *h$_1$ḷnghwén*. The substitution of the strong stem in these forms can easily have occured after the loss of Sievers as a synchronic rule. On the other hand, *sas-* as the weak stem of *ses-* 'sleep' is surely quite old (the mechanically predictable zero-grade *ss-* is hardly conceivable). We would therefore expect old *sasnuwénti* > Hitt. *šašnumanzi*. The replacement of the latter by *sasnuanzi* /sasnwantsi/ after regular *arnuanzi* /arnwantsi/ etc. is hardly surprising. In the first plural and the verbal noun, where all *nu*-verbs had forms in -*um-,* the dissimilated variant was tolerated, but a third plural *šašnumanzi* would have been quite isolated and aberrant versus regular *arnuanzi, ḫuinuanzi, išparnuanzi,* etc.
    The evidence of borrowed words (*ḫalmaššuitt-*) or personal and place names (*Telipinu-, Zalp(u)wa-*) is of little or no value, since their historical phonology is unknown to us.

[96] In later manuscripts we do find spellings such as *ḫu-u-wa-(a)-i* 'runs' with scriptio plena of the *u,* but in Old Hittite there is a consistent contrast between *ḫu-wa-a-i* = /hwāi/ and *nu-u-wa* = /nuwa/, i. e., between *Cu-wa-* /Cwa/ and *Cu-u-(w)a-* /Cuwa-/.

'pure' /supistwarēs/, *a-ru-wa-ez-zi* and *a-ru-wa-en-zi* 'he bows, they bow' /arwā-etsi/, /arwā-entsi/.

From its initial locus where it stood for -*Cu-a-,* the spelling -*Cu-wa-* then spread to become the standard spelling. This extension undoubtedly began within paradigms. Thus already in OH beside *Za-al-pu-wa* and *Za-al-pu-aš/-az* we find once *Za-a-al-pu-wa-az* with the -*wa-* taken from the former. Likewise, based on the necessary *a-ru-wa-ez-zi* /arwā-etsi/ (to avoid *a-ru-a-ez-zi*), we find *a-ru-wa-an-zi* for /arwāntsi/ 'they bow' instead of expected *a-ru-an-zi*. Compare again the parallel development with the laviovelars: after forms like *a-ku-wa-(a)-tar* 'drinking' for /ag<sup>w</sup>ādar/ we find already in OH *a-ku-wa-an-zi* for /ag<sup>w</sup>antsi/ 'they drink' beside more frequent *a-ku-an-zi*. The spread of the spelling -*Cu-wa-* for /Cwa/ in the history of Hittite in place of -*Cu-aC-* is analogous to that of -*V-u-wa-* for /Vwa/ at the expense of older -*V-u-a-* and -*V-wa-* (see 2.1.6): the more highly characterized (even redundant) spelling ousts the simpler.

## 3.1.2 Original sequences of *\*Two*

Čop, *Linguistica* 2 (1956) 19 ff, first proposed that *\*w* disappears in Hittite between an obstruent and a following *\*o.* Čop's formulation of this rule is very broad, including even the delabialization of labiovelars before *\*o.* Many of his etymologies, however, are doubtful, and some have been definitely eliminated by one crucial and irrefutable example: Hitt. *idālu-* 'evil', which is cognate with CLuv. *adduwali-* 'idem'. Both of these are built on an *l*-stem noun *\*h₁éd-wŏl-* 'evil' attested in CLuv. *ad-duwal-* (for *\*éd-* to *add-* in Luvian see Čop himself, *IF* 75 (1970) 91–92).[97] The Luvian word with preserved *w* shows that the loss of *\*w* in this position is specifically Hittite. This eliminates Čop's derivation of *šalli-* 'great' < *\*swoli-,* since Luvian has *šalḫitti-* 'growth' with no trace of the *w.*[98]

The only other solid example also involves a dental stop: Hitt. *dān* 'twice, secondly' < *\*dwoyom* (see 2.2.4). It remains possible that the original conditioning was broader, but in the absence of any compelling

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[97] For the reconstruction *\*h₁edwŏl-* see Watkins, *Indo-European Studies IV* (1981) 270.

[98] His explanation of *šarra-* 'divide' < *\*swer-* 'cut' is also unlikely on several grounds. First, the double -*rr-* in Hittite points to a sonant-laryngeal cluster (see note 91), and there is no trace elsewhere of a laryngeal in the root *\*swer-.* Second, there is no good evidence that *\*swer-* meant 'cut'. All the reflexes listed by Pokorny, *IEW* 1050, point to 'prick, pierce'. Finally, if the attractive equation of Hitt. *šuwaru-* with Lith. *svarùs* 'heavy' by Puhvel, *JAOS* 101 (1981) 213–214, is correct, then a sequence *\*swo-* is preserved in Hittite.

examples to the contrary, the rule should be given as: $*w > \emptyset$ between dental stop and $*o$ in pre-Hittite.[99]

### 3.1.3 Sequences of $*Cw\underset{o}{R}$

While $*w$ is generally preserved between a consonant and following vowel, sequences of $*Cw$ plus syllabic sonant have a different treatment. In effect, a sequence $*Cw\underset{o}{R}C$ does not syllabify as $*Cw\underset{o}{R}C$ (> Hitt. *CwaRC*), but as *CuRC*. Eichner, *MSS* 31 (1973) 73, claims that $*w\underset{o}{R}$ appears generally in Hittite as *uR*, but we have seen evidence that $*{-}w\underset{o}{r} > {-}war$ after a vowel (2.1.4). I therefore follow Schindler, *BSL* 70.8, in restricting the change $*w\underset{o}{R} > uR$ to postconsonantal position. This is in fact the context of most of Eichner's own examples: *ḫurkil* 'sin, perversion' < $*h_2w\underset{o}{r}gel$ 'twisting' (cf. Skt. *vṛjiná-* 'crooked, deceitful'), *ḫurki-* 'wheel' < $*h_2w\underset{o}{r}gi$- (probably to the same root $*h_2werg$- 'turn, twist'), *ḫurt-* 'curse' < $*h_2w\underset{o}{r}t$- (beside *ḫ(u)wart-* < $*h_2wert$-), *tūriya-* 'hitch up' < $*dhw\underset{o}{r}h_{1/3}ye$- (cf. Skt. *dhūr-/dhur-* 'harness'), *pēru-* 'rock' < $*perur$ < $*perw\underset{o}{r}$ (= Grk. *peîrar* 'end'). Note also *ḫullanzi* 'they fight' < $*h_2w\underset{o}{l}h_2enti$ (note 33). Eichner's remaining examples of $*w\underset{o}{R} > uR$ are in word-initial position, which means in effect that word-boundary counts here (as often) as a consonant: for examples see 1.1.6 above.

### 3.1.4 Syncope of $w$

Friedrich, *HE*[2] I (1960) 27, cites examples of 'contraction' of *we/wi* to *u* and *(u)wa* to *u* in Hittite. Many of these cases can now be shown to reflect other situations. In some instances we are dealing with different forms: *weter* and *uter* 'they brought' belong to two different verbs *wēda(i)-* (for older *widā(i)-*) and *uda-*. The alternates *ḫuinu-* and *ḫunu-* 'cause to run, are based on the respective weak stems of the base verb: *ḫuy(anzi)* and *ḫuw(anzi)*. As discussed above, note 13, *uranu* and *waranu* 'burns' represent two different synchronic stages, of which *ur-* is the older, being replaced by *war-* after the transitive *war(nu)-*.

Other alternates may plausibly reflect different ablaut grades: OH *ḫušwant-* 'living' with zero-grade of *ḫuiš-* 'live' (replaced by *ḫuišwant-* after the verb), *kuera-* and *kura-* 'field' < *'section' to *kuer-/kur-* 'cut', *ḫ(u)wart-* and *ḫurt-* 'curse' < $*h_2wert/h_2w\underset{o}{r}t$- (3.1.3) and probably *waš-*

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[99] Čop also derives Hitt. *danduki-* 'mortal' from a $*dhwontu$-, relating the word to Grk. *thánatos* 'death' and Skt. *ádhvanīt* 'vanished'. Likewise, he explains *dala-* 'let alone' < $*dwol$-, comparing Arm. *dul* 'rest'. For counterproposals see Oettinger, *Stammbild.* 550 and 488.

*tul/uštul* 'sin' < *\*wems-/wṃs-* (1.1.6), *tuekka-* and occasional oblique *tukka-* 'body' (from an old root noun *\*twék-s, \*tuk-és*; cf. Skt. *tvác-* 'skin'), *ant(u)waḫḫa-* and *antuḫša-* 'human' probably remodeled from *\*en-dhweh₂-os, \*en-dhuh₂-s-es* (see Eichner, *Sprache* 25 (1979) 77).[100]

Nevertheless, there remain several cases of apparent syncope of *uwV* or *wV* to *u*. In some of these instances the syncope seems to be associated with extra word-length or a shift in accent caused by the addition of further suffixes: *leḫundā(i)-* 'pour' and ᴰᵁᴳ*liḫundāi-*, ᴰᵁᴳ*liḫuntalli-* (vessels) < *liḫ(u)want-*, ptc. to *liḫ(u)wā(i)-* 'pour'; *miyaḫunte-* 'be old', *miyaḫunteš̃-* 'become old', *miḫuntaḫḫ-* 'make old' (beside *miyaḫ(u)wandaḫḫ-*), *miḫuntatar* 'old age' (beside *miyaḫuandanaš̃*), all < *\*miyaḫwant-* 'old'; *nekmuntatar* 'nakedness' < *\*nekmu(w)antatar* (for expected *\*nekumantatar*; cf. note 58); *kappuške-* (beside *kappuweške-*), iterative to *kappuwe-* 'count'; oblique stem *karuliyV-* (beside *karuwiliyV-*) to *karuwili-* 'ancient'. In other examples, however, no conditioning for the syncope is apparent: *šuwant-* 'full' (2.1.5) appears as *šunt-* in *IBoT* I 36 II 41.[101] The verb *šanḫu-* 'roast' shows third plural *šanḫunzi* beside *šanḫuwanzi* /sanhwantsi/ and participle *šanḫunda/šanḫuta* beside *šanḫuwanta* /sanhwanta/. We also find ᴺᴬ⁴*kuwannan-* beside *kunnan-* 'copper; bead' and *kuwaliu-* beside *kuliu-* 'blue'(?) (also syncopated in the derivatives *kuliyawaḫḫ-* and *kuliyaweš̃-*). The poorly attested base noun *ḫaš̃unga-* 'sieve'(?) is to my knowledge always syncopated, while the derived verb *ḫaš̃u(wa)ngā(i)-* appears in both forms.

Syncope of *-wa-* to *-u-* in final syllables is shown by dat.-loc. pl. *šeknuš̃* (*KBo* II 3 II 33) versus regular *šeknuwaš̃* in the parallel *KUB* XXXII 115 + III 25, and in the gen. sg. *Nunnuš̃* and *Taruḫšuš̃* (Friedrich, *HE* I².27). Since the latter are: (1) in NH copies, not OH originals, and (2) found in names, thus nouns, there is virtually no chance that they reflect a PIE ending *\*-e/ous*, which would have been proper to adjectives.

Since the syncopated forms in most instances occur alongside the unsyncopated, it is impossible to formulate a rule for the process. The examples known to me also do not seem to show any particular chronological distribution.

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[100] A few forms may be outright errors, such as *pár-ku-uš̃-zi* (*KUB* VIII 2 Rs 6.8) beside *pár-ku-iš̃-zi* (ibid. Rs 10). Omission of the last vertical of IŠ produces UŠ.

[101] The finite forms *šuttati* and *šuttaru* 'be full/filled' in *KBo* VI 34 III 17 probably also represent syncopated forms beside *šuwattari* in *KUB* XIII 2 III 24. It cannot be excluded, however, that they reflect old athematic middle forms of the root *\*seuh₁/₃-* 'be full'. Compare *šuptāri* beside *šuppatta* to *šup-* 'fall asleep'.

## 3.2 Postconsonantal prevocalic *y

### 3.2.1 Preserved sequences of *CyV

In principle, we would expect the behavior of postconsonantal prevocalic *y to parallel that of *w. That is, we would expect to find reflexes of both *CyV and *CiyV. Trager and Sturtevant, *Lg* 19 (1943) 209 ff, also investigated this possibility for *y, but once again could reach few firm conclusions based on a global survey of the spellings.

Examination of the orthography of OH manuscripts reveals a situation parallel to that of *w*, but with a few important differences which make the analysis less certain. Based on the same arguments given for -*Cu-V*- above, the frequent OH spellings in -*Ci-e*-, -*Ci-u*- and -*Ci-aC*- can and should be read as /Cye/, /Cyu/ and /Cya/, notably in forms of verbs in -*ye*-/-*ya*-: *pé-eš-ši-e-mi* /pessyemi/, *pé-eš-ši-e-et* /pessyet/, *a-ni-at* /anyat/, *ti-an-zi* 'they place' /dyantsi/, *pí-an-zi* /pyantsi/, *ti-e-ez-zi* /tyetsi/, etc. The same holds true for the forms of *i*-stem nouns and *ya*-stem adjectives: LÚ.MEŠ*ha-a-pí-eš* /habyēs/, *ha-a-pí-aš* /habyas/, *hal-ki-aš* /halkyas/, *ha-an-te-ez-zi-e-eš* /hantetsyēs/, *pít-tu-li-uš* /pitulyus/, *ap-pí-iz-zi-uš* /apitsyus/ etc.[102]

Neu, *StBoT* 18 (1974) 38, note 6, properly insists on reading OH *pí-ra-an* as *pé-ra-an* based on contemporaneous *pé-e-ra-an*. Since the cuneiform sign *pí* can always be read *pé*, there are no grounds for assuming a genuine alternation /piran/: /peran/.[103] By the same principle we should also read OH spellings from -*ye*-/-*ya*- verbs such as *pé-eš-ši-it*, *ti-iz-zi* and *ku-uš-ša-ni-iz-zi* as *pé-eš-ši-et* /pessyet/, *ti-ez-zi* /tyetsi/ and *ku-uš-ša-ni-ez-zi* /kussanyetsi/, based on contemporaneous *pé-eš-ši-e-ez-zi*, *ti-e-ez-zi* and *ku-uš-ša-ni-e-ez-zi*. There are no grounds for assuming a 'contraction' of /ye/ to /i/. There is in fact independent

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[102] Neu, *StBoT* 25 (1980), transcribes all instances of ambiguous *Ce/i* signs followed by signs containing *e* consistently as *Ce-e(C)*: not only *pé-e-ra-an*, but also LÚ.MEŠ*ha-a-pé-(e)-eš*, *hu-la-a-le-e-mi*, etc. The stated goal of this procedure, ibid. XIII, is to achieve as high a measure of 'objectivity' as possible, free of 'subjective linguistic analyses'. Unfortunately, to choose either -*Ce-e(C)*- or -*Ci-e(C)*- as a transliteration unavoidably involves linguistic analysis. His transcriptions inevitably imply an interpretation /habes/ and /hulalemi/ parallel to /peran/. Other forms of these paradigms in -*(i)ya*- show that this implied analysis is wrong: we must read /habyes/ and /hulalyemi/. 'Objectivity' could be better achieved by printing the ambiguous signs in capitals: e.g. *ha-RI-e-mi*. Since Neu himself employs this device a handful of times, it is hard to see why he does not follow this procedure consistently.

[103] Such a genuine alternation is only demonstrable when one finds contemporaneous alternate spellings in -*Ci-e*- and -*Ci-i*-, such as OH *ú-e-et-[(ta-an-da-an-ni)]* in *KBo* III 22 Rs 64 vs. *ú-i-it-ti* in *KUB* XXIX 32,2.

evidence against such an assumption. If the type of *pé-eš-ši-iz-zi* represents a real contraction to /pessitsi/, it is inexplicable that there are no examples of this contraction in the first and second persons, where the spelling would be unambiguous: there are to my knowledge no examples of the type *peššimi, *peššiši, *peššinun, *peššiš.

Therefore OH spellings in *-Ci-e-*, *-Ci-u-* and *-Ci-aC-* are to be read as /Cye/, /Cyu/ and /Cya/. Furthermore, spellings in *-Ci-iC-* are also to be read /CyeC/, provided that they are supported by alternates in *-Ci-e-eC-* (and by other forms of the paradigm in *-Ci-aC-*; see notes 35 and 102).

Just as the spelling *-Cu-a-* is avoided in Old Hittite, being replaced by *-Cu-wa-* (vs. *-Cu-aC-*), so likewise *-Ci-a-* is replaced by *-Ci-ya-* (vs. *-Ci-aC-*). For the same reasons as given above for *w*, *-Ci-ya-* is to be read as /Cya/. The use of *-ya-* is simply to avoid *-Ci-a-*, as shown by the following examples: *ḫu-la-li-ya-mi* versus *ḫu-la-li-an*, *ḫu-et-ti-ya-ti* versus *ḫu-e-et-ti-an-ta*, *ḫal-ki-ya-ša* versus *ḫal-ki-aš*, *pí-ya-a-an* versus *pí-an-zi*, *ḫal-zi-ya* versus *ḫal-zi-an-zi*, *pár-ši-ya* versus *pár-ši-an-t/da*, etc. It is to be expected, of course, that the spelling *-Ci-ya-* spreads, just like *-Cu-wa-*, and thus already in OH we do find *pí-ya-an-zi* occasionally for the more frequent *pí-an-zi* /pyantsi/ after forms like *pí-ya-a-an* /pyan/. Nevertheless, the origin of *-Ci-ya-* as a replacement for disfavored *-Ci-a-* is still clear.

For the most part, then, the picture presented by OH orthography for postconsonantal *y* is the same as that for *w*: /Cye/ is spelled consistently *-Ci-(e)-eC-* and /Cu/ consistently *Ci-u(C)*, while /Cya/ is spelled predominantly *-Ci-ya-(C-/V-)* or *-Ci-aC-* (occasionally already *-Ci-ya-aC-*).

We would expect in principle also to find contrasting spellings in *-Ci-i-e-*, *-Ci-i-u-* and *-Ci-i-(y)a-*, pointing to /Ciye/, /Ciyu/ and /Ciya/, parallel to *-Cu-u/ú-e-* and *-Cu-u-(w)a-* for /Cuwe/ and /Cuwa/. There is one likely example of *Ci-i-e* for /Ciye/: *piye-* 'send' is written in OH *pí-i-e-ez-zi* /piyetsi/ and *pí-i-e-er/pí-i-er* /piyer/. Here the sequence /Ciye/ results from the irregular preservation of intervocalic *\*y* in a transparent univerbation *pe-ye-* versus *u-ye-* (see 2.2.5). The lack of any OH spellings *pé-e-i-e-* (or *pé-e-ya-*) suggests that /peye-/ has become /piye-/. In the absence of any parallels (since all other old sequences of *\*eye* became *ē*), this cannot be absolutely assured, and a reading /peye-/ remains possible.

It is true that there are other spellings in OH of the form *Ci-i-e, Ci-i-u* and *Ci-i-aC*. However, unlike *Cu-u-e* and *Cu-u-(w)a*, which contrast with *Cu-e* and *Cu-wa*, the spellings in *Ci-i-V* alternate with

those in *Ci-V*: *ti-i-ez-zi, ti-i-en-zi* (and *ti-i-e-et*) beside *ti-e-ez-zi, ti-en-zi*; *pé-eš-ši-i-e-ez-zi* beside *pé-eš-ši-e-ez-zi*; *kar-pí-i-ez-zi* beside *kar-pí-ez-zi, ši-i-uš* beside *ši-ú-un, ut-ni-i-aš* beside *ut-ni-an-da-an*.[104]

There are obviously two possible interpretations for these alternate spellings: either they represent genuine alternants (/tiye-/: /tye-/, /siyu-/: /syu-/, /utniya-/: /utnya-/), or they are merely alternate spellings for /tye-/, /syu-/ and /utnya-/. It is clear that in the case of *šiu-* 'god', a genuine alternation is possible, reflecting Lindeman variants *\*dyéus: \*di(y)éus:* cf. Vedic *dyāús: di(y)āús*. The plausibility of such an alternation being preserved into Hittite is open to question, but it is also true that the spelling *ši-i-uš* for /syus/ is hard to motivate. We have seen that the OH scribes are on the whole very consistent in their spelling of glides, and those orthographic variants which do exist are explainable in terms of the cuneiform syllabary. The spelling *ši-i-uš* strongly suggests /siyus/ beside *ši-ú-un* /syun/.[105]

It is also hard to see any motivation for writing /Cya/ as *Ci-i-aC* instead of *Ci-aC* (or *Ci-ya-aC*): *ut-ni-i-aš* calls for a reading /utniyas/ (cf. *tu-u-az* = /duwats/). In addition to *ut-ni-i-aš* we also find in OH manuscripts the genitive singulars *šu-li-i-aš* 'of lead', *ha-aš-ti-i-aš* 'of bone' and *tu-uš-ka-ri-i-aš* 'of joy'. Each of these is hapax, and the lack of alternates in -*Ci-aš* is probably due to chance.

In the case of *utnē* 'land' the Sievers form /utniy-/ is to be expected, and it is the more common /utny-/ implied by spellings like *ut-ni-aš* which requires explanation. In the case of *haštāi-, šulāi-* and \**tuškarāi-*[106] the oblique stems would not to all appearances provide a Sievers environment, and we would expect *haštiaš, šuliaš* and *tuškariaš* like *luttiaš* /lutyas/ to *luttāi-* 'window'. On the other hand, it can hardly be accidental that all of these stems belong to the same class, and models from this class with Sievers environments in the oblique stem are not hard to find: cf. *šaklāi-* 'rite, custom', whose old oblique stem would necessarily be /sakliy-/ (perhaps attested in dat.-loc. sg. *ša-ak-li-ya*, NH ms.), or *hukmāi-* 'conjuration', which would have an oblique stem /hukmiy-/ (note gen. sg. *hu-uk-mi-ya-aš*, NH ms.). Conversely, many (if not

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[104] There is also *kar-ši-i-ez-zi* in the OH manuscript of the Laws. The absence of a *kar-ši-ez-zi* is surely due to chance, as is the lack of unambiguous *e*-spellings. I read *iz* as *ez* based on the arguments given above for *pešsiezzi*, etc.

[105] The only sure instance of [(d)]*ši-i-uš* is in *KBo* III 22 Rs 47. It may also be attested in *KBo* XX 21 Rs 2, but the last sign could be incomplete. It is noteworthy that in OH manuscripts the oblique stem is alsways spelled *ši-ú-nX-* (never *ši-i-ú-*).

[106] For *tuškarāi-* beside *tuškaratt-* compare *maniyahhāi-* beside *maniyahhatt-* 'management, control'.

most) nouns with an oblique stem in -(C)Cy- would have had /CyV/, which could lead to /utny-/ beside expected /utniy-/.

If we are facing a genuine alternation /CyV/: /CiyV/ in these examples due to analogical influence in each direction, then in principle we would expect to find the same situation in regular *i*-stem nouns, where some oblique stems should have regularly /CyV/ (e.g. *luzzi-*) and others regularly /CiyV/ (e.g. *ēšri-*). The present lack of any variants in /CiyV/ in this class is not strong evidence against their existence, since the number of examples of oblique cases of *i*-stem nouns in OH manuscripts is quite small.

Given the restricted data base provided us by published OH manuscripts, the existence of a genuine linguistic contrast /CyV/: /CiyV/ in Hittite cannot be regarded as proven. Nevertheless, the coexistence of /CumV/ and /CwV/ shows that Sievers variants */CuwV/ and /CwV/ did survive into Anatolian to some point, so that we would expect likewise /CiyV/ beside /CyV/. We have also seen that the OH scribes were otherwise very consistent in their spelling of glides, and the spellings -*Ci-i-u*- and -*Ci-i-a*- for /Cyu/ and /Cya/ would be hard to motivate orthographically.

On the other hand, it is very difficult to see the source for a genuine alternation in *ti-(i)-e-ez-zi, pé-eš-ši-(i)-e-ez-zi* and *kar-pí-(i)-ez-zi,* while an orthographic motivation for the inserted *i* is not hard to find.[107] As already discussed above, note 35, spellings in -*Ci-iC*- are ambiguous at all stages of Hittite. Depending on alternate spellings and other related forms, this spelling may represent /CiC/, /CeC/ or /CyeC/. In particular, third singular verb forms in -*Ci-iz-zi* and -*Ci-it* may be read as /-Cetsi/, /-Cet/ (thematic stem) or as /-Cyetsi/, /-Cyet/ (*ye/ya*-stem). Thus there would have been a motivation for inserting an *i* to mark the glide in *ye/ya*-stems: hence *kar-pí-i-ez-zi* to assure /karpyetsi/, not /karpetsi/ (cf. *lu-uk-ki-iz-zi* /luketsi/).[108] I therefore interpret the few examples of -*Ci-i-(e)-eC*- which alternate with -*Ci-(e)-eC*- as also spelling /Cye̩/.

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[107] In the case of *ti-(i)-e-* 'step' one could find monosyllabic forms of the paradigm where a Lindeman variant could occur: pret. 3rd sg. *\*(s)t(i)yét.* One could even claim that the source in *pé-eš-ši-(i)-e-* 'throw (away)' was the corresponding form of the simple verb *ši-(i)-e-* 'throw, shoot': *\*sh₁(i)yét.* Even allowing this, however, it seems far-fetched to assume that from these few forms a living alternation was generalized first to the entire paradigm and then from base verb to the univerbation. Furthermore, in *kar-pí-(i)-e-* no inherited source for the variation can be found.

[108] In the case of *ti-e-ez-zi* and *pé-eš-ši-e-ez-zi* this explanation may not seem to hold, since here there are distinct signs *ti* and *te, ši* and *še,* and thus *ti-e-ez-zi* would be unam-

### 3.2.2 Syncope of *y*

As in the case of *w*, many of the alleged examples of syncope of *y* (Frie-
drich, *HE*² I.27) do not exist. As shown above in 3.2.1, present and
preterite third singulars of *ye/ya*-verbs spelled *-Ci-iz-zi* and *-Ci-it* are
to be read as /-Cyetsi/ and /-Cyet/. They do not reflect syncope of
*-(i)ya-* or *-(i)ye-* to *i*. In the case of *iškizzi* and *išk(i)yazi* we are prob-
ably facing two different stems, an older thematic stem /(i)ske-/ and a
newer competing stem /(i)skye-/, as often in Hittite.

Nevertheless, there are also some apparent examples of genuine syn-
cope of *ye* or *ya* to *i*. As with *w*, some of these appear to be associated
with word-length or accent. As already noted above (2.2.1 with note
75), the iteratives of stems in *-ye-/-ya-* show in OH manuscripts con-
sistently *-iške-* (never *-eške-*!), which must be the syncopated form of
the expected stem *-yeške-*, which is attested in *ši-e-eš-ki-iz-zi* /syeske-/.
It is probably not an accident that the one unsyncopated example has a
disyllabic iterative stem, while the others have three or more syllables.
The length of the iterative stem (with the accent at least originally on
the *-ške-*) is probably responsible for the widespread syncope here.
Compare the contraction of *-āiške-* to *-eške-* in note 141. Note also ex-
amples like *wešuriškattalla-* 'oppressor' to *wešur(i)ya-* '(op)press', *ḫantiti-
talla-* 'betrayer' to *ḫantit(i)ya-* 'betray', *šittar(i)ya-* (beside *šiyattar(i)ya-*)
'send by a sealed document' < *šiyattar* 'seal', *laḫlaḫḫinu-* 'cause to gal-
lop' < *laḫlaḫḫ(i)ya-* 'gallop, rush' and *miḫuntaḫḫ-* and *miḫuntatar* cited
above in 3.1.4.

In other cases no conditioning for the syncope is evident. In *IBoT*
I 36 II 48 we find *ti-in-ti-eš* /tintēs/ for usual *ti-ya-an-t-* /tyant-/
'standing, stationed' (note that this same manuscript shows syncope of
*wa* to *u*; 3.1.4 above). Likewise an OH manuscript *KBo* XVII 36 II 6
has *ti-i-in-zi* /tintsi/ for usual *ti-(ya)-an-zi* /tyantsi/ 'they step'. The
stem of *memia(n)-* 'word' is /memya(n)-/, which is spelled overwhelm-
ingly *me-mi-aC-*, *me-mi-ya-CV-*. The dat.-loc. sing. is also attested as
*me-mi-ni*, apparently /memini/. The adverb SIG₅-*in* 'well' is probably
*\*lazzin*, a syncopated form of the neuter nom.-acc. sg. participle
*lazz(i)yan* to *lazz(i)ya-*/SIG₅-*ya-* 'be favorable, good'. A similar syncope
of *ya* to *i* may have contributed to the merger of OH adjectives in

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biguously /tyetsi/. However, already in Old Hittite /te/ and /se/ are spelled occasionally
as *ti-e* and *ši-e* (undoubtedly on the model of *li-e* /le/, *ri-e* /re/ etc.): see e.g. *KBo*
XXV 23 Rs 6–7, where *te-e-pu-uš* is followed by *[t]i-e-pu*, both /debu/. Therefore *ti-e*
and *ši-e* are ambiguous spellings, and the insertion of *-i-* to mark the glide is motivated
here too.

-zz(i)ya- (< *-tyo-) with the i-stems: OH ḫantezz(i)ya- 'in front, first' >
NH ḫantezzi-.

## 4.1 Postvocalic and preconsonantal *w

### 4.1.1 Short Diphthongs *eu, *ou, *au

It has long been assumed that the PIE short diphthongs *eu, *ou and
*au are all monophthongized to u in Hittite: see Sturtevant, CGr¹
(1933) 101–102, Pedersen, Hitt. 170 and Kronasser, VLFH 44–45.
However, as Kronasser's scanty list of examples indicates, finding sure
instances of this change is not easy. One must not only establish a root
etymology, but also a specific ablaut grade, and in paradigms with
quantitative ablaut, the possibility always exists of generalization of the
zero-grade. Nevertheless, there are no good indications of any result
except u from the short u-diphthongs, and a strong case can be made
for this being the regular phonological outcome.

Perhaps the best example of *eu > u is found in the active singular
of nu-verbs (thus already Sturtevant): e.g., arnumi 'I (re)move' < *h₁r̥-
néu-. Hittite keeps quantitative ablaut in other athematic mi-verbs,
either directly or indirectly: OH kuerzi, kuranzi 'cut' and kuenzi, kun-
anzi 'slay' directly from *kʷérti, *kʷrénti and *gʷhénti, *gʷhnénti; ḫar-
nikzi, ḫarninkanzi 'destroy', remade from *h₂r̥négti, *h₂r̥ngénti; ḫur-
nezzi, ḫurnanzi 'sprinkle' (synchronically thematic), remade from
*h₂wr̥-néh₁ti, *h₂wr̥nh₁énti (see Oettinger, Stammbild. 150ff). It is
therefore unlikely that the constant form -nu- of the nu-verbs is due to
leveling of the zero-grade from the plural. We are dealing rather with a
merger of *eu and *u to u (likewise Oettinger, Stammbild. 163).

Another solid example of u < *eu is provided by Hitt. luttāi- 'win-
dow', which forms a word equation with Toch. B lyauto 'opening'. The
root etymology of lyauto is given by Van Windekens, le tokh. I.266:
PIE *leu(hₓ)- 'cut, separate' (cf. Skt. lunáti 'cuts off'). Eichner, MSS
31.80, derives Hitt. luttāi- from the same root, without mention of the
crucial Tocharian cognate. The importance of the Hittite-Tocharian
equation is that it extends to the formation: both nouns point to an
original collective *'open space' with 'amphikinetic' inflection: nom.-
acc. *léu(hₓ)-tōi, gen. *lu(hₓ)t-yés. This amphikinetic collective is un-
doubtedly based on an action noun in *-ti-: *'opening' < *'cutting'. For
a similar amphikinetic collective in Hittite compare ḫaštāi, ḫašt(i)yaš
'bone(s), Gebein(e)' (beside Skt. ásthi 'bone'): see further 4.2.2.[109] The

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[109] Van Windekens, le tokh. II/1.27, suggests a preform *lēu-t(o)- with a suffix *-oi-
for Toch. B lyauto, obl. lyautai. Hitt. luttāi shows that the unmotivated 'suffix *-oi-' is

preforms above would give regularly Hitt. *luttāi, lutt(i)yaš.* Just as in the case of the *nu*-verbs, leveling of the zero-grade is possible, but unlikely.

Sturtevant proposes that the root-present third singular *ūpzi* 'rises' is almost certainly from a full-grade *\*éup-ti* (similarly Oettinger, *Stammbild.* 233). Again, quantitative ablaut in root presents is generally preserved in Hittite directly or indirectly: cf. *ḫuekzi, ḫukanzi* 'slaughter', *ēšzi, ašanzi* 'be'. In cases where there is leveling, it is in favor of the singular, not the plural: *linkzi, linkanzi* 'swear' for *\*langanzi* (cf. Oettinger, *Stammbild.* 171), *wēḫzi, weḫanzi* 'turn' beside regular *waḫḫanzi,* and *šešzi, šešanzi* 'sleep' beside regular *šašanzi.* Therefore it is once more unlikely that the *u* of *ūpzi* is from the zero-grade of the plural.

The change of *\*eu* to *u* is also likely attested in the OH nom. sg. *ši-i-uš* 'god' < *\*di(y)éus.* On the directly attested examples of *šiu-* 'god' see most recently Starke, *ZA* 69 (1979) 47 ff. On the development of the rest of the paradigm see Watkins, *Fest. Güntert* (1974) 101 ff, and Neu, *StBoT* 18 (1974) 120 ff. Since the PIE nom. sg. may have been *\*d(i)yéus* instead of *\*d(i)yéus* (see Schindler, *Sprache* 19 (1973) 156–157), a change of *\*eu > u* in this word can also not be excluded. On Hitt. *šu-u-uš* /su-us/ 'full' < *\*séuh₁/₃-us* see 2.1.5.

The evidence of the Hittite noun *kutt-* 'wall' for *\*eu > u* is weak. As a primary *t*-stem, this noun probably had acrostatic inflection like 'evening': nom. sg. *\*nógʷ-t-s*, gen. sg. *\*négʷ-t-s* (Lat. *nox,* Hitt. gen. *nekuz* in *nekuz meḫur*). This already posits both nom. sg. *\*ĝhóu-t-s* and gen. sg. *\*ĝhéu-t-s.* Furthermore, in roots of the shape TER there were apparently secondary zero-grade forms (cf. Skt. *-stu-t-, -vr̥-t-*). Thus one must add *\*ĝhut-* as a possibility. Since *\*eu, *ou* and *\*u* all yield Hitt. *u,* it is impossible to say whether or not any forms of *kutt-* 'wall' directly reflect an *e*-grade *\*ĝheut-* (as suggested by Oettinger, *Stammbild.* 538, following Güterbock and Hamp).[110]

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wholly unnecessary. The PIE long diphthong *\*ēu* is equally unsupported and unnecessary: for Toch. B *lyau-* representing *\*leu-* compare the thematic present stem *klyaus-* 'hear' for *\*ḱleuse-.* According to VanWindekens, *le tokh.* II/1.16, the nom. sg. *lyauto* is regular from a form without final *-i* like Grk. *peithṓ* and Skt. *sákhā.* Alternatively, if one does not accept his claim that final *\*-ōi* gives Toch. B *-i* (see Schindler, *Sprache* 26 (1980) 84), one could also still suppose *\*léu(h_x)tōi* like Hittite. The oblique stem *lyautai* could show a secondary diphthong *\*oi < *oy-m* after loss of final syllables (VanWindekens, *le tokh.* I. 31 and 62) or *\*ōi* with the lengthened grade generalized from the nominative before loss of final syllables (for *\*ō > ā* in Toch. B in internal position see VanWindekens, *le tokh.* I. 26). Compare the spread of the lengthened grade in Hittite: 4.2.2.

[110] The verbal forms of *lukk-* in Hittite have also been cited as examples of *\*eu > u.* We have seen, however, that *lukke-/lukka-* 'kindle' represents *\*loukéye/o,* not *\*léuke/o-* (2.2.1). Watkins, *TPS* (1971) 69, compares OH *lukkatta* 'dawns' to Skt. *rócate* < *\*leukoto,*

The equation of Hitt. *lukke-/lukka-* 'kindle' with Lat. *lūcēre* 'idem' from *loukéye/o-* establishes one good example of *ou to *u*. The *u*-stem nom. sg. GUD-*uš* 'cow' presumably also reflects *$g^w$óus* (Grk. *boûs*, etc.): cf. 4.1.2. As noted above, nom. sg. *kuzza* /guts/ 'wall' may well represent directly *$\hat{g}$hóuts*. For *mu-ḫḫi* 'I fall' < *móu$h_1$-$h_2$ei* see note 122.

The clearest case of PIE *au to Hitt. *u* is the preverb *u-*, which exactly matches Lat. *au-* and Slav. *u-* (the latter functionally as well as formally). The initial PIE *a (as opposed to *$h_2$) is required by the Hittite and Luvian reflexes of the prevocalic form: Hitt. adverb *aw-an* and Luv. *aw-iti* 'comes' (cf. Skt. *áv-a*). The equation of Anatolian initial *a-* with Skt. *a-* and Lat. *a-* cannot be explained by anything except PIE *a. An initial *$h_2$ would have remained in Hittite before *w: cf. *ḫuiš-* 'live' < *$h_2$wes-*. Oettinger's preform *$h_{1/3}$ow-* (*Stammbild.* 126 etc.) is excluded by the Lat. *au-*.[111] Kronasser's suggestion, *VLFH* 44, that the Hittite preverb *u-* could reflect a zero-grade *u-* is highly improbable, given the formal and functional match with Slavic *u-* and Latin *au-*.

If Hitt. *ḫuḫḫa-* 'grandfather; forefather' matches Lat. *auus* 'idem', then the *u* may represent phonetic PIE *au: *$h_2$eu$h_2$o-* [hauho-]. Another possible example of *au > *u* is the singular of 'see': *uḫḫi* etc. (see 4.1.2 below).

## 4.1.2 Long Diphthongs *ēu, *ōu and *āu

While there is general agreement that the short diphthongs in *u are monophthongized to *u* in Hittite, the claim that the corresponding long diphthongs give *āu* (Sturtevant, *CGr*[1].103) has been disputed. Pedersen, *Hitt.* 38, denies it, while Kronasser, *VLFH* 45, accepts it with reservations. As Kronasser points out, long diphthongs are not frequent in PIE to begin with, and some well-known cases are not attested in Hittite. The reconstruction of laryngeals for PIE reduces the number even further, limiting long diphthongs essentially to lengthened-grade

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deriving the athematic *lukta* 'dawns' likewise from *leukto*. However, by his own analysis, *Idg. Gram.* III/1.86–87, both athematic *-to* and thematic *-oto* represent renewals of the type in *-o (Hitt. *eša* 'sits down'). In the last type, TERT roots show zero-grade: e.g., Skt. *aduha(t)* and *duhé* 'milks < *dhughó(i)*. Therefore, *lukto* and *lukoto* (based ultimately on a *luko) cannot be excluded: cf. Oettinger, *Stammbild.* 273 and 275. See also Excursus IX.

[111] The lack of initial *ḫ-* in Hittite also eliminates *$h_3$-*. Cf. *ḫašduer* 'branches, twigs' < *$h_3$e-sd-wēr*.

*ēu and *ōu (and perhaps a few analogical lengthened grades in *āu).[112]

The only good case of such an inherited lengthened grade in Hittite is āu < *ōu in diphthongal stems such as ḫarnāu- 'birthing stool' and ḫarganau- (a body part). A nominative singular like ḫarnāuš may directly reflect an amphikinetic ending *-ōu-s. Compare the corresponding type in -āi- in Hittite (4.2.2) and the Greek type of hḗrōs, hḗrōos 'hero', Avestan -bāzāus, -bāzuuō '-armed' (similarly Kronasser, VLFH 114). The Avestan example shows the expected amphikinetic inflection with zero grade of the suffix and full grade of the ending in the genitive singular: *-w-és > -(u)uō. In Hittite the paradigm has been leveled after the nominative: nom. sg. ḫarnāuš, acc. sg. ḫarnāun (instead of *ḫarnān < *[-ōm] */-ow-m/, gen. sg. ḫarnāwaš (instead of *ḫarn(u)waš < *-wés).[113]

It is true, of course, that none of the Hittite nouns in -āu- can be shown to be inherited, nor do any have even solid root etymologies. Pedersen, Hitt. 39–40, derives the type secondarily from *ā-stems, comparing Skt. pŕtanā-yú- 'enemy' < pŕtanā- 'enemy army'. However, this presupposes a development *-eh₂-yu- > -āu-, with loss of *h₂ before *y, then loss of intervocalic *y. We have seen above that tāya- 'steal' contradicts such a development (2.2.2). One would expect *-āyuš, *-āyun, etc. from *-eh₂-yu-. The phonological problem could be solved in the same way as for the -ā(i)- verbs: i.e., one could assume that *-eh₂-yu- was renewed by *-ā-yu- when the final */-eh₂/ ([-ah]) of the base nouns became *-ā. Then *-āyu- would lead regularly to -āu-. However, this presupposes that the formation was alive in Common Anatolian (or later), and there is no evidence for a suffix *-yu- in Anatolian. Furthermore, even this explanation will not do for the parallel stems in -āi- (see 4.2.2 with note 134). Therefore, despite the lack of any specific equa-

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[112] PIE roots in *a did not originally participate in ablaut (Meillet, Intro. 54), but there are undeniable examples of quantitative ablaut in such roots: note Skt. inddhé 'kindles' and Hitt. inu- 'make hot' with zero-grade of *ai- 'be hot'. Skt. āvis 'manifest' surely shows a lengthened-grade of *au- 'perceive'.

[113] For the acc. sg. PIE *[-ōm], not *[-ow-m̥], compare 'cow': acc. sg. */gʷówm/ = *[gʷōm] > Skt. gā́m. See Schindler, Sprache 19 (1973) 213–214.

Kronasser, VLFH 114, suggests that the loc. sg. ḫarnau may represent a lengthened-grade endingless locative in *-ēu/-ōu. However, the authenticity of the locative form ḫarnau in KBo V 2 is dubious. The same manuscript also shows an apparent acc. sg. ḫarnau (for a stem which is exclusively animate). The scribe may not have understood the inflection of the stem.

tions, Hittite stems in -āu- may be related to stems in *-ou- elsewhere with a nom. sg. in *-ōus.

Other cases of -āu- in Hittite represent secondary long diphthongs from various sources. One example is found in the oblique stem -āun- of a small set of nouns in -āwar: karāwar 'horn', partāwar 'wing', ašāwar 'sheepfold', ḫaršāwar 'plowed field', plus several uncertain cases. The presence of a suffix -war elsewhere in Hittite suggests a segmentation karā-war, and Eichner, MSS 31 (1973) 92, derives karāwar from a collective *kreh₂ plus a collective suffix *-wor, *-un-, with the assumption that the formation is later than the loss of final *-h₂ in Anatolian. Nussbaum, Indo-European Studies III, Harvard University (1977) 334 ff, follows this analysis with minor modifications.[114]

It seems clear that this analysis is essentially correct. There remains, however, the problem of the source of a 'collective' suffix -war (versus the well-known verbal noun suffix) and the matter of the original inflectional type. Eichner offers no support for either a collective -war or for the proposed *-wor, *-un- inflection. Nussbaum does point to Hitt. ḫašdwēr 'branches, twigs' as a collective in *-wér, but this word is isolated in its formation: *h₃e-sd-wér vs. *h₃é-sd-o- in Grk. ózos etc. From Nussbaum's amphikinetic *-wōr, *-unés we would properly expect a nom.-acc. in *-wār: cf. the preserved length in the collectives widār < *wédōr 'water' and ḫaštāi < *h₂éstōi 'bone(s)'.

J. Schindler has called my attention to Lat. cadāuer 'corpse', which offers both a suitable meaning for a collective and the same apparent structure as Hitt. -āwar: stem in *-eh₂ plus a further *-wer suffix.[115] Both Hitt. -war, -unaš and Lat. -uer could be derived from a hysterokinetic paradigm with nom.-acc. *-wér, gen. *-un-és. However, since *h₂ is normally preserved in Hittite before w (see note 62), from an old *-eh₂-wer, *-eh₂-un-es we would expect Hitt. *-aḫḫ(u)war, *-aḫḫunaš. This difficulty could be solved by assuming the same renewal as suggested above for verbs in -ā(i)- (see again 2.2.2): i.e., *-aḫḫ(u)war, *-aḫḫunaš was replaced by -āwar, -āunaš when the final *-aḫḫ of the base nouns became *-ā.[116] Alternatively, one could view the Hittite and

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[114] Nussbaum assumes a hysterokinetic collective as the base (*kréh₂, *kr̥h₂-és) and an amphikinetic inflection of the *-wer, -wen- suffix (nom.-acc. *-wōr, gen. *-un-és).

[115] Lat. cadāuer (and the similar papāuer 'poppy') have previously been tentatively analyzed as old perfect active participles in *-wes- ('that which has fallen', 'that which has puffed up'): see Stolz-Schmalz, Lat. Gram. 340 with refs. This derivation hardly accounts for the -ā- of cadāuer versus thematic base verb cadō, -ere.

[116] Compare both arma-want- and armaḫḫ-(u)want- 'pregnant' parallel to armā(i)- and armaḫḫ- 'be pregnant'.

Latin formations as parallel but independent. In either case, the $\bar{a}u$ of -$\bar{a}una\check{s}$ is secondary from *-$\bar{a}$-$u$- (-$\bar{a}$ < *-$eh_2$).[117]

Two more examples of a secondary long diphthong $\bar{a}u$ are found in the verbs $au(\check{s})$- 'see' and $mau(\check{s}\check{s})$- 'fall'. The former has been cited as evidence for an original long diphthong *$\bar{a}u$: both Sturtevant, *CGr*[1].103, and Kronasser, *VLFH* 45, derive $au\check{s}$- 'see' < PIE *$\bar{a}us$- 'dawn'. However, the PIE word for 'dawn' is an amphikinetic $s$-stem based on a root *$h_2wes$-/ *$h_2eus$- 'shine': nom. sg. *$h_2\acute{e}us$-$\bar{o}s$, gen. sg. *$h_2us$-$s$-$\acute{e}s$. From the nom. sg. come regularly Aeol. $\acute{a}u\bar{o}s$ and Lat. aur-$\bar{o}r$-$a$, while Sanskrit has generalized the zero-grade of the root: $u\d{s}\acute{a}s$, gen. $u\d{s}\acute{a}s$. There is no lengthened grade.[118]

Moreover, the -$\check{s}$- of $au\check{s}$- 'see' is clearly secondary. The starting point for comparison should be $au$-/$u$- 'see', which may be more readily related to PIE *$au$- 'perceive': Skt. $avati$ 'observes, notices', Grk. $aisth\acute{a}no$-$mai$ 'I perceive', Lat. $audi\bar{o}$ 'I hear', etc. (see Pedersen, *Hitt.* 172 ff).

We have already seen, however, that a diphthong *$au$ becomes Hittite $u$ (4.1.1). This is the likely source of the $u$- in $u\d{h}\d{h}i$ 'I see' < *$\acute{a}u$-$h_2ei$.[119] The $\bar{a}u$ of $au\check{s}zi$ 'he sees' remains unexplained.

A similar problem arises with $mau(\check{s}\check{s})$- 'fall', which is usually derived from PIE *$meuh_1$- 'move': thus Oettinger, *Stammbild.* 526. However, given that a following *$h_1$ does not produce a long $i$-diphthong (*$n\acute{o}ih_1$-$h_2ei$ > $ne\d{h}\d{h}i$; 4.2.1), it is improbable that it leads to a long $u$-diphthong either. Therefore either *$m\acute{o}uh_1$- or *$m\acute{e}uh_1$- would have become *$mu$-, which is in fact attested in $mu\d{h}\d{h}i$ 'I fall' (*KUB* XLIII 60 I 34), just like $u\d{h}\d{h}i$ 'I see'.[120]

If *$au$, *$euh_1$ and *$ouh_1$ become Hittite $u$, there remain only two possible sources for the $\bar{a}u$ of $au\check{s}$- and $mau\check{s}\check{s}$-: an inherited PIE length-

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[117] Greek nouns in -$\bar{a}(w)\bar{o}n$, such as $op\acute{a}on$ 'companion' (Myc. *Oqawoni*) and *Makh\bar{a}on* (Myc. *Makawo*) to $m\acute{a}kh\bar{e}$ 'fight', could also reflect original amphikinetic adjectives in *-$eh_2$-$won$-, *-$eh_2$-$un$-$es$ built on collective nouns in *-$eh_2$-$wer$, *-$eh_2$-$un$-$es$. For another view of *-$\bar{a}won$- see Schmid, *IF* 74 (1969) 126 ff.

[118] For the details of the Greek reflexes, which do not require a lengthened-grade, see Kiparsky, *Lg* 43 (1967) 624 f.

[119] The direct equation of Hitt. $u\d{h}\d{h}i$ and Vedic $uve$ as *$uh_2ei$ (Rosenkrantz, *IF* 64 (1959) 68, and Watkins, *Idg. Gram.* III/1.83) also remains possible. Cf. note 122.

[120] I owe the correct interpretation of $mu\d{h}\d{h}i$ to Robin Barr (via C. Watkins). This form confirms that the original paradigm of $mau(\check{s}\check{s})$- 'fall' was parallel to that of $au(\check{s})$- 'see'. Oettinger's suggestion, *Stammbild.* 526, that the pret. 3rd plural $mauir$ is analogical after $auir$ is unlikely in view of $mu\d{h}\d{h}i$. The secondary nature of the -$\check{s}\check{s}$- in $mau(\check{s}\check{s})$- is revealed by the related verb $mum(m)iye$- 'shower down', whatever the details of its formation. For the spread of the stem $mau\check{s}\check{s}$- from the third singular, compare the spread of $ezz$- 'eat' and $mazz$- 'endure'.

ened grade, or a secondary long diphthong. Sturtevant and Kronasser suggest a PIE lengthened grade, but do not motivate its occurrence. Oettinger, *Stammbild.* 526, note 17, suggests that it may have originated in the root aorist. If this is so, one would expect lengthened *e*-grade: Oettinger's dragging of the *o*-grade from the iterative stem *$*mouh_1éye$*-* is entirely ad hoc. It is quite uncertain whether a PIE *$*ēu$* would have led to Hittite *āu*: see the discussion of Hitt. *šiu-* 'god' in 4.1.1. In any case, a lengthened *e*-grade *$*ēi$* definitely cannot account for the parallel long diphthong *āi* in *ḫi*-conjugation *i*-presents: preterite third singulars like *paiš, daiš* and *naiš* cannot represent old sigmatic aorists such as *$*(e)nēih_1-s-$* (cf. Oettinger, *Stammbild.* 405 and 460).[121]

As will be shown below in 4.2.2, the *āi* diphthong of these preterite third singulars cannot be original and must be analogical after the present third singulars *pāi, dāi* and *nāi,* where it is regular. The present third singular, as the functionally 'unmarked' member of the verb paradigm, serves as the founding form for all other persons. The *āi* spreads not only to the third singular preterite, but to various other finite forms as well.

It can hardly be accidental that *au(š)-* 'see' and *mau(šš)-* 'fall' in general show *u* where the *ḫi*-verbs in final *-i* show *e* or *i* and *āu* where the latter show *āi*: pres. 1st sg. *teḫḫi: uḫḫi,* pres. 2nd sg. *daitti: autti,* pres. 3rd sg. *dāi: aušzi,* pres. 1st pl. *piweni: umeni* (but also *naiwani: aumeni*), pres. 2nd pl. *pišteni: ušteni* (but also *naišteni, daitteni: aušteni, autteni*), pres. 3rd pl. *tianzi: uwanzi,* etc. This striking parallelism argues that the *āu* of *au(š)-* and *mau(šš)-* is merely analogical after the *āi* of the *ḫi*-verbs in final *-i.*

The parallelism is obscured, of course, by the fact that the pres. 3rd sg. of 'see' and 'fall' ends in *-šzi,* and the pret. 3rd sg. in *-šta.* However, these *mi*-conjugation forms are surely secondary. Oettinger, *Stammbild.* 407, may be correct in asserting that the imv. 3rd sing. was the entry point for the *mi*-conjugation into the paradigm. A stem *au-* + imperative ending *-u* of the *ḫi*-conjugation would have given *$*aw-u >$* *$*amu.$* The renewal of *-u* by *-tu* from the *mi*-conjugation necessarily entails a preceding *-s-,* thus *au-s-tu* for the irregular *$*amu,$* because in *ḫi*-conjugation verbs in final *-i* there is a strong tendency to insert *-s-* before

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[121] Oettinger reconstructs regular *e*-grade *$*neih_{1/3}s-t$* at one point (p. 405), specifically denying *$*nēih_{1/3}s-t,$* but lengthened-grade *$*nēih_{1/3}s-t$* at another (p. 460). Whether one reconstructs full-grade or lengthened-grade for the sigmatic aorist, there can be no question that we are dealing with *e*-grade: cf. Grk. *édeiksa,* Lat. *uēxī,* etc. Since both *$*ei$* and *$*ēi$* give Hittite *e* (4.2.1 and 4.2.2), the *āi* of *naiš* and similar forms cannot be explained directly from the sigmatic aorist.

any ending beginning originally with a dental stop: pres. 2nd sg. *pešti*, 2nd pl. *pišteni*, pret. 2nd sg. *pešta*, pres. 2nd pl. *daišteni* and *naišteni* beside *daitteni* and *naitteni*, etc. The source of this -*s*- is a matter of considerable debate and may be left open here. Note in support of the assumed renewal *\*amu* → *au-š-tu* that one also finds *peštu* beside regular *pāu* from *pāi*- 'give'.

Oettinger assumes that the replacement of athematic *ḫi*-conjugation pres. 3rd sing. *\*awi* (< *\*aw-ei*) by *au-š-zi* is after the imperative 3rd sing. *auštu*, but it may be independent. A pres. 3rd sing. *\*awi* would have been nearly as aberrant in the paradigm as *\*amu*, as shown by his chart, *Stammbild.* 407. The parallel of the *ḫi*-verbs in final -*i* would have brought pressure for a stem *āu*- (with a diphthong, not *\*aw-i*, which would have been syllabically /a-wi/). Since a direct parallel to *pāi, dāi, nāi* would have produced an equally aberrant pres. 3rd sg. *\*āu*, the only recourse would have been renewal by the *mi*-conjugation ending *\*-ti* (> -*zi*), which would preserve the diphthong: *\*āu-ti*. Again the ending in initial -*t*- entailed insertion of -*s*-, hence *auš-zi*. The *āu* of *au(š)*- and *mau(šš)*- is thus secondary after the *āi* of *pāi-, dāi-, nāi-*, etc.[122]

### 4.1.3 Orthography of *āu*

The Hittite long diphthong *āu*, which is not widely attested, is spelled variously as -*Ca-u(C)*-, -*Ca-a-u(C)*- and rarely -*Ca-a-u-uC*-. In all of these spellings, of course, the sign *u* may be replaced by *ú*. The only spelling attested thus far in OH manuscripts is -*(C)a-u(C)*-, but there are not many examples: *a-ša-ú-ni, pár-ta-ú-ni-it* and *ga-ra-ú-ni* plus *a-uš*- 'see'. In *ḫarnāu*- 'birthing stool', the only frequent stem in -*āu*-, the predominant spelling is *ḫar-na-a-u(C)*- with scriptio plena of the *a*, but there are no examples from Old Hittite.

Judging from the orthography of the parallel long diphthong *āi*, which is much better attested (4.2.3), it seems likely that all the spellings for *āu* represent merely orthographic variants of a single form /āw/. While a secondary shortening to /aw/ in some cases cannot be dis-

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[122] As an athematic *ḫi*-present, *\*meuh₁*- would have had third singular *\*móuh₁ei*, third plural *\*méuh₁ṇti*. The loss of *\*h₁* disassociated this verb from the other athematic *ḫi*-presents, leading to forms parallel to the *ḫi*-verbs in final -*i*: *muḫḫi*, *\*muwi*, *\*muwanzi*. Hence the analogical influence described above. The original inflection of *au-/u*- 'see' is uncertain. It is possible that *\*au*- 'perceive' had quantitative ablaut like the '*u*-present' *\*leh_xu*- 'pour' (see Jasanoff, *Heth. und Idg.* 88): *\*áu-h₂ei* > *uḫḫi*, *\*u-wéni* > *umeni*. However, given the sense 'see', derivation from an old perfect (Oettinger, *Stammbild.* 407) is also possible. Cf. note 119.

proved, there are no good grounds for such a change. The frequent omission of the scriptio plena of the *a* in this combination is hardly surprising, since there could be no confusion with the short diphthong *au*, which had become *u*. Compare the frequent transliteration of Skt. *āu* and *āi* as simply *ai* and *au* for the same reason.

## 4.2 Postvocalic preconsonantal *y

### 4.2.1 Short Diphthongs *ei, *oi and *ai

Just as the PIE short *u*-diphthongs are monophthongized to *u* in Hittite, so also the short *i*-diphthongs all become *e*: see Sturtevant, *CGr*[1].99, Pedersen, *Hitt.* 170, Kronasser, *VLFH* 44, Eichner, *MSS* 31 (1973) 76–79. Here the situation is complicated by the fact that we sometimes find *i* instead of the expected *e*. This is part of the more general problem of the status of *e* and *i* in Hittite, which I will shortly treat in detail elsewhere. There are sufficient examples to show that the regular result of the short *i*-diphthongs is *e*, specifically a close mid-front vowel /ẹ/.[123]

For *ei* > *e* we may cite first of all forms of *ei*- 'go', reflected in the imperative *ehu* 'come!' /ẹhu/ < *ei-h₃au (similarly Sturtevant and Eichner) and in OH *ú-e-ez-zi* 'comes' /wẹtsi/ and *ú-e-et* 'came' /wẹt/ < *au-(h₁)ei-.[124] The middle stem *nēa*- 'turn' also reflects *néih₁o-,

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[123] The *e* which results from the *i*-diphthongs does not fall together with inherited *ě or *ē in Hittite. This is shown by the fact that in late Neo-Hittite (Tuthaliya IV, Suppiluliuma II) the *e* < *Vi falls together with *i*, while *ě* and *ē* do not. Contrast late *niyari* 'turns' < *neyari* < *nēa(ri)* < *néih₁o and late nom.-acc. pl. nt. *kĩ* < *kē* < *ḱoi(h₁)* with late *ēšzi* /ẹstsi/ and *eša* /ēsa/. The merger with *i* suggests that the *e* resulting from *Vi is a close *ẹ*, versus the more open inherited *ě* and *ē*.

Eichner, *MSS* 31.76, assumes *ẹ̄* < *ei and a more open *ẹ̄* < *oi/ai. First of all, there is no solid evidence for these vowels being long. As we have seen, they do not fall together with *ē* in Hittite, and in Luvian one can just as well assume direct *ẹ > *i and *ē > *î as *ẹ̄ > *ē > *î. Second, Eichner's claim that *-ei always appears as *-i* in absolute final position vs. *-e* < *-oi/-ai is false: note the present third singulars *war(a)šše* and *mazze*. Both final *-ei and *-ai/-oi appear in OH as *e* and *i*. Third, the difference between *kitta* 'lies' < *ḱei- and *kē* 'these' < *ḱoi- is probably due to palatalization in the former, as Eichner suggests, but this does not require the assumption of two different outcomes for *ei and *ai/oi. Nothing stands in the way of positing the palatalization first (conditioned by the front vowel): *ḱei- > *kʸei- > *kʸẹ- > k⁽ʸ⁾i- vs. *ḱoi- > kẹ. The preceding palatalization in this environment raises the *ẹ* to *i* in pre-Hittite. Since both *e* < *ei and *e* < *oi/ai merge with *i* in late Neo-Hittite, I assume a close *ẹ* for both.

[124] Eichner, *MSS* 31.76, implies a contrast between *ú-e-et* < *eit and *ú-iz-zi* < *eiti (with '*i*-umlaut' in the latter), but the contemporaneous spelling *ú-e-ez-zi* shows that we should read *ú-ez-zi*, just as *ú-et* on the basis of *ú-e-et*, or *pé-ta-i* on the basis of *pé-e-ta-i*.

where the $*h_1$ makes the $*i$ tautosyllabic, producing a diphthong $*ei$, which is monophthongized. The $*h_1$ is then lost, giving OH *nēa-* /nẹa-/ with hiatus, later replaced by *nēya-* with hiatus-filling *y* (see 2.2.5).

As a *ḫi*-verb ending in a consonant, active *nāi-* 'turn' must have originally had the same athematic inflection as *šakk-/šekk-* 'know', etc.: singular $*nói h_1-h_2ei$, $*nói h_1 th_2ei$, $*nói h_1-ei$, third plural $*néi h_1-n̥ti$. By regular phonological developments its singular comes to be identical to that of *ḫi*-verbs in final -*i*: *neḫḫi*, *netti*, *nāi* (on the last see 4.2.2 below). As in the *i*-presents, the long diphthong of the third singular is spread elsewhere (2nd sg. *nāitti*, 1st pl. *naiwani*, 2nd pl. *naištani*, etc.), but the regular weak stem *nē-* /nẹ-/ $<$ $*néi h_1$- is preserved in the third plural and the participle (OH *nēanzi*, *nēant-*, later *neyanzi*, *neyant-*).[125]

The change $*ei > ẹ$ is also seen in the singular of *ḫi*-verbs with stem-final -*i*: $*dhéh_1 i-h_2ei >$ OH *teḫḫe* /dẹḫḫe/ 'I place', $*h_2wéh_1 i-h_2un$ $>$ *ḫueḫḫun* 'I ran' (for the preforms see Jasanoff, *Heth. und Idg.* 88). Since $*ēi$ also apparently gives *ẹ* in Hittite (4.2.2), one could also assume $*eh_1i > *ēi > ẹ$, but there is no positive evidence that loss of intervocalic $*h_1$ lengthened the preceding vowel.[126]

The present third singular ending of the *ḫi*-conjugation $*ei$ also originally becomes *e* /ẹ/, but already in Old Hittite it usually appears as *i*: *wa-ar-aš-še* /warssẹ/ 'harvests' in *KUB* XXIX 30 III 4 beside usual *wa-ar-aš-ši* /warssi/ ibid. III 8, and *ma-az-zé* 'withstands' in *KBo* VII 14 Vs 8 for usual *ma-az-zi*.[127]

The correspondence of Hitt. *kitta* with Skt. *śéte* and Grk. *keîtai* 'lies' demands a preform $*kéito$. However, the verb is spelled consistently *ki-it-ta*, with no indication of an *e*. Since there is no orthographic constraint against a plene writing here (cf. the pronominal instrumental *ke-e-et*), we can hardly follow Sturtevant and Kronasser in reading /keta/. If the Hittite vowel were *e*, there would surely be at least a few plene

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[125] As indicated in note 123 above, in late NH *neya-* is replaced by *niya-* by the change of *ẹ* to *i*.

[126] Jasanoff assumes that $*dhéh_1 i-h_2ei$ would have regularly given $*tiḫḫe$, but we have seen that $*ei$ gives in the first instance *ẹ*.

[127] The alternation in OH of 3rd sg. -*e*/-*i* and 1st sg.-*ḫe*/-*ḫi* has two possible explanations. One is to assume that the merger of (accented) *ẹ* and *i* which takes place in late NH had already begun in unaccented syllables in OH. This is made doubtful by the fact that the enclitic (and thus unaccented) dat. sg. -*še* is consistent in OH mss., while the verbal endings -*ḫe* and -*e* are already rare beside -*ḫi* and -*i*. It therefore seems preferable to assume with Eichner, *MSS* 31.79, that -*ḫi* (and I would add -*i*) are analogical after the other present endings of Hittite with the particle -*i*. Likewise, the replacement of -*še* by -*šši* would be after the regular dative ending -*i*, but at a later date (thus Eichner, *MSS* 31.78).

spellings *ke-e-et-ta*. Eichner, *MSS* 31 (1973) 78, proposes that *\*ei* becomes *i* after a velar, perhaps due to palatalization of the latter: thus *\*kei* > *\*kē* > *\*kʸē* > *kʸi*. For the reasons given in note 124 above, I assume rather *\*kei* > *\*kʸei* > *\*kʸẹ* > *\*kʸi*.

The explanation of *\*ei* > *i* in terms of palatalization seems attractive, but Eichner's corollary that *\*g* > *k* before *i* is not. A change of voicing quality in the preceding stop based on the height of the following vowel is highly unlikely. This 'rule' is based on the erroneous view that initial *ki-* represents only /ki-/ and initial *gi-* only /ge-/. The latter interpretation is based on Riemschneider, *Fest. Otten* (1973) 273–281, who claims that *gi-* alternates with *gi-e-*, seldom with *ki-*, and never with *ki-i-*. This is false, as shown by the verb *kinu-* 'break open', which is spelled often *gi-nu-* and also several times *ki-i-nu-* (*KUB* XXX 10 Vs 24.28, XIII 1 IV 7). This verb is clearly to be read /ginu-/ < *\*ĝhi-néu-*, a causative to *\*ĝhei-* 'gape, lie open' (Lat. *hiō* 'gape', etc.): see Laroche, *BSL* 58 (1963) 58 ff. The alternate spellings *gi-nu-* and *ki-i-nu-* also show that orthographic voiced and voiceless stops have no more functional distinction word-initially than elsewhere in Hittite.[128]

Eichner supports his claim of *\*gi* > *ki* with a derivation of *kiš-* 'become, happen' (iter. *kikkiš-* with geminate *-kk-* !) from *\*geis-* 'turn' (cf. Germ. *kehren* 'turn'). However, one can make an equally plausible etymology from a root with initial *\*k-*: *\*keis-* 'stir, be in motion' seen in Skt. *céṣṭati* 'stirs, moves, acts'. For the shift 'be set in motion' > 'happen' compare Germ. *(ge)schehen* 'happen' < *\*skek-* 'spring, start in motion'.[129]

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[128] The claim of Oettinger, *Stammbild* 556, that initial tenues are 'almost always' spelled with tenues and initial mediae 'mostly' with mediae is simply false, as a close look at his own material shows. The impossibility of drawing etymological conclusions from initial voiced/voiceless spellings is shown by Oettinger's derivation, *Stammbild*. 109, of Hitt. *tar-/dar-* 'say' < *\*dher-* 'hold firm' instead of from *\*ter-* 'speak loudly' based on the preponderance of spellings with *da-*. In fact, the verb is spelled in OH mss. with *ta-* (*KBo* XVII 1 passim). Most often the verb is spelled with the sign *tar-*. Since the Hittites do not use *dar* as a phonetic sign, the actual preponderance of *t*-spellings is without significance (the etymology from *\*ter-* remains by far semantically preferable). It is undeniable that the Hittites had certain preferred spellings (initial voiceless stop in some words, initial voiced stop in others), but some of these change from OH to NH, and there is no satisfactory correlation between the choice of voiced or voiceless stop sign and the etymological value of the consonant. Note the further example of OH *tu-u-wa-* for /duwa-/ (2.1.4).

[129] For the etymology *kiš-* < *\*keis-* (with different semantic comparisons) see already Szemerényi and Čop cited in Tischler, *HEG* 585.

Furthermore, the change *ei > i after a velar is also probably attested in gi-im-ma-an-t- 'winter' < *ĝheimn-ont- and gi-ma-ni-e- 'spend the winter' < *ĝhei-mon-ye- or *ĝhei-mn̥-ye-. We have seen that Riemschneider's claim that gi- necessarily equals /ge-/ is false, and these words never show a plene writing ge-e-em- or ge-e-ma-ni-e-. Therefore they may be read as /gimmant-/ and /gimanye-/. However, the evidence of the former for a change *ei > i after velar is weakened by the possibility that the preform had zero-grade of the root: *ĝhimn-ont-.[130]

The change *oi to e is seen in the OH enclitic dative pronoun -šše 'to him' < *soi (universally recognized since Sturtevant). The anim. nom. pl. ending -e of the demonstrative pronouns (kē, apē) may also be equated with Grk. -oi, Skt. -e (Pedersen, Hitt. 195 and others). We have already seen neḫḫi < *nóih₁-h₂ei, which also shows that a following *h₁ does not lead to a long diphthong (further in 4.2.2).

The best examples of *ai to e involve *h₂. The pres. 1st sing. of the ḫi-conjugation *-h₂ei (phonetically already *-hai in PIE) appears as -ḫe in Old Hittite beside -ḫi: for attestations see Otten-Souček, StBoT 8 (1969) 76–77. Oettinger, Stammbild. 71, cites Hitt. isḫeni- 'beard stubble' (?), which may be compared to Lat. saeta 'bristle', reflecting a *sh₂ei- (phonetic *shai-), but the alternate spelling isḫiyani- makes this dubious.[131]

The neuter nom.-acc. plural -e of the demonstrative and interrogative pronouns (kē, apē, kue) also undoubtedly continues an i-diphthong, but it is very difficult to determine which one. Sturtevant, CGr¹.99, compares Hitt. kue to Lat. quae, but the latter probably represents *kʷeh₂-ī, i.e. a regular collective in *-eh₂ plus a relative particle *-ī: see Meillet-Vendryes, pp.500–501. A *kʷeh₂-ī would have given Hitt. *k(u)waḫḫi. Eichner, MSS 31.79, suggests either a dual in *-oih₁ or a plural in *-ei-h₂. The latter might present a problem in the case of ka- 'this', since *ḱei-h₂ should lead to *kī by the change of *ei to i after

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[130] Several other examples of *ei to e suggested by Eichner are possible, but not certain. We have already cited his derivation of weši- 'pasture' < *weis- 'flourish' instead of *wes- 'feed' (note 3). He also explains wešuriya- 'oppress, stifle' from *weis- 'turn; twist', comparing for the formation OCS vichrŭ 'whirlwind' < *weisuro-. However, Carruba, StBoT 2.53, derives wešuriya- from *wes- 'wither' seen in ON visna, OHG wesanen 'wither'. Against Eichner's weḫ- 'turn' < *weih₂ - see note 8. It is doubtful that dat.-loc. sg. -i represents *-ei from the dative as well as *-i from the locative. It certainly cannot be used as evidence that final *-ei always gives -i in Hittite (cf. note 123).

[131] Since the OH spelling of 'with me' is katti-mmi with the regular dat.-loc. sg. ending -i, the comparison of katte with Grk. kataí (Sturtevant, CGr¹.100, Kronasser, VLFH 44) must be abandoned. For OH inu- 'make hot' < *i-néu- instead of enu- < *ai-néu- see notes 78 and 112.

velar given above. The derivation from the dual *-o-ih₁ is phonologically possible, since we have already seen that a following *h₁ does not lead to a long diphthong: *neḫḫi < *nóih₁-h₂ei*.

One should also consider simply *-o-i*: the thematic stem plus the neuter plural ending -*i* seen in Hittite *ḫalhaltumari* 'corners' etc. This may be compared with the Skt. neuter plural ending -*i* of consonant stems. The latter is usually taken as *-h₂*, but laryngeals do not 'vocalize' in Sanskrit word-initially before a consonant, so it is questionable whether they did so word-finally after a consonant.

## 4.2.2 Long Diphthongs *ēi*, *ōi* and *āi*

Sturtevant, *CGr¹*. 102–103, claims that PIE long *i*-diphthongs appear in Hittite as *āi*, but none of his examples will stand close scrutiny. The only solid case of an *āi* from an inherited long *i*-diphthong is found in Hittite nouns in -*āi*-, which reflect a PIE amphikinetic inflection. There are two good examples of original collectives: *ḫaštāi* 'bone(s)', gen. *ḫašt(i)yaš* < *h₂ést(h₂)ōi, *h₂st(h₂)y-és* and *luttāi* 'window' < 'opening', gen. *lutt(i)yaš* < *léu(hₓ)tōi, *lu(hₓ)-tyés* (for the word equation of *luttāi* to Toch. B *lyauto* 'opening' see 4.1.1).[132] For another example of an amphikinetic collective in Hittite compare *widār* 'water(s)' < *wédōr*.

Hittite also has animate nouns in -*āi*-, such as *lingāiš*, gen. *link(i)yaš* 'oath', which are comparable to the type of Grk. *peithṓ* 'persuasion', Skt. *sákhā* 'friend, companion' and Tocharian nouns in *-oi-* (on these see Van Windekens, *le tokh.* II/1.16 ff). The Hittite nom. sg. in -*āiš* represents the inherited lengthened-grade ending *-ōi* plus the usual secondary -*s* which Hittite adds to most asigmatic animate nom. singulars.[133] Like Greek and Sanskrit, Hittite tends to spread the lengthened grade -*āi*- from the nominative to other cases: acc. sg. -*āin* for regular *-ān < *-ayan < *-oy-m̥*. The inherited nom. pl. in *-oy-es* would have led regularly to -*aeš*, but both the nom. pl. and the acc. pl. modeled after it show frequent scriptio plena: *ḫurtāeš, lingāuš*. It is therefore likely that they also reflect lengthened-grade forms after the nom. sg.: *ḫurtāyes, *lingāyes*, which then become the attested forms with loss of intervocalic *y*. Kronasser, *VLFH* 110, suggests that dative singulars in -*āi (lingai, ḫurtai)* may represent old endingless locatives in *-ōi* (or

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[132] Hitt. *luttāi-* 'window' is neuter in the singular, reflecting its original status as a collective 'open space'. Once it became concretized to 'window', an object which can be counted, there was a need for a genuine plural, filled by animate forms *(luttaeš, luttauš)*, since in Hittite the neuter 'plural' still functions as a collective.

[133] Compare *ḫaraš* 'eagle' < *h₃érō + s, ḫaštērza* 'star' /hastērts/ < *h₂stér + s* and *ḫaššaš* 'hearth' < *h₂ehₓseh₂ + s*.

*-ēi) with lengthened grade. However, the older forms of the dative singular appear to be rather those with zero-grade of the stem like the other oblique cases: *linkiya, zaḫḫiya*. The dative singulars in -āi are probably analogical after the *i*-stem adjectives: *šallai < *sallayei* (see 4.2.2 below). The entry point for the influence of the *i*-stem adjectives would have been the nom. and acc. plurals in -āeš and -āuš, which resemble the endings of the *i*-stem adjectives *(šallaeš, šallauš)*, not those of the *i*-stem nouns *(pūrieš, pūriuš*, i. e. /puryēs/, /puryus/). Once we even find an acc. pl. *lingamuš* after the *u*-stem adjectives (see above 2.1.2 and 2.1.4).[134]

There is one likely example of inherited *ēi, and it appears not as āi, but as ē /ẹ̄/. I am speaking of *utnē* 'land, country', which in Old Hittite has a nom.-acc. *utnē*, obl. *utn(i)y-*, as shown by Neu, *StBoT* 18 (1974) 109 ff. Neu attempts to account for this inflection by assuming a collective nom.-acc. pl. *utni(y)a*. He derives *utnē* by contraction of *iya* to *e*, citing as an example *iyat > (i)ēt*. As we have seen above (1.2.1), no such contraction exists, since the forms of 'do, make' are to be read as /yet/ and /yat/, the latter replacing the former. Genuine cases of syncope of *ya* show *i*, not *e* (3.2.2).

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[134] Pedersen, *Hitt.* 38–39, denies that the Hittite type in -āi- continues PIE stems in a long diphthong. He suggests rather that these stems are from *ā-stems extended by *-yo-. This derivation is phonologically impossible. If the formation were old, *-eh₂-yo- would lead to *-āya-, with preserved *y* as in *tāye-* 'steal' (see 2.2.2). If the formation were created or renewed after loss of final *-h₂ (like nouns in -āwar; see 4.1.2), then *āyo would have led to *ā-a (and eventually *ā) with loss of intervocalic *y (cf. the plural of verbs in *-āye-/-āyo- in 2.2.2). Thus Pedersen's suggestion must be rejected.

There is one other likely example of Hitt. āi < PIE *ōi: *karaitt-/karitt-* 'flood'. For this primary *t*-stem one may reconstruct a paradigm with nom. sg. *ĝróits, obl. *ĝrit-. For the type see the discussion of *kutt-* 'wall' in 4.1.1 and for the possible lengthened-grade in the nom. sg. compare Skt. *nák* beside Lat. *nox* 'night' < *nóĝʷts. The preform *ĝróits would give regularly OH nom. sg. *karaiz* (and dat.-loc. sg. *karaitti* with generalization of the āi of the nominative). The weak stem *ĝrit- is well attested as *karitt-*. It is quite uncertain whether the nom. sg. *gi-re-e-ez* in a NH manuscript attests a genuine /grets/ from an old full-grade *ĝróits. For the root *ĝrei- compare Av. *zrayah-* 'lake, sea' = Skt. *jráyas-* '(heavenly) expanse' (J. Schindler).

It is also dubious whether the rare Hittite dat. sg. in -ai reflects PIE *-oi from the o-stems. The examples known to me *(labarnai, ᵐAttāi, ḫaššannai)* are all in copies of older texts, not OH originals. Furthermore, at least *ḫaššannai* to a consonant stem *ḫaššann-* must be secondary. Even if the ending is original in the Hittite *a*-stems, it need not reflect old *-ōi, but may represent rather a new creation of stem-final -a- plus synchronic dat.-loc. sg. ending -i. Compare the instrumental *šakuwait < šakuwa-* + -it beside correct *šakuwit*.

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Since *utnē* functions as both singular and plural, an original collective is likely, and the attested paradigm may be derived from a hysterokinetic *\*udnéi, \*udn(i)yés*: see Schindler, *BSL* 70 (1975) 9.[135] For another hysterokinetic collective in Hittite compare *ḫašduēr* 'branches' < *\*h₃e-sd-wēr*. The word *utnē* is the only evidence for original *\*ēi* to *ē* /ẹ̄/ which I am aware of, but I also know of no counterevidence to this change.

Aside from *\*ōi > āi* in the *āi*-stem nouns, Hittite long diphthongs in *āi* are secondary, the results of contractions. One set involves contractions of sequences ending in /ẹ/ < *\*ei*. The first example is the singular stem of *pāi-* 'go' < *\*pe-ẹ-* < *\*pe-(h₁)ei-*. The same development is attested in the pres. 3rd sing. of *ḫi*-verbs in final -*i*: *dāi* 'places' < *\*de-ẹ* < *\*dheh₁y-ei* (with loss of *\*h₁* and then intervocalic *\*y*).[136] Likewise, in the dative singular of *i*-stem adjectives *\*-eyei > \*-eyẹ > \*-e-ẹ > -ai*.[137] Very similar are the development of *pāi* 'gives' < *\*pa-ẹ* < *\*pe-ay-ei* (with deletion of *\*e* before *\*a* (2.2.1 and 2.2.3) and loss of intervocalic *\*y*) and *nāi* 'leads' < *\*nẹ-ẹ* < *\*nóih₁-ei*.

Since the pres. 3rd sing. is the functionally unmarked form of the verb, it may serve as the 'founding form' for the rest of the paradigm. The stem form in *-āi* thus spreads in *ḫi*-verbs in final -*i*: pres. 2nd sg. *daitti, paitti/paišti* (beside *pešti*),[138] likewise *naitti*; pres. 2nd pl. *daitteni/tāišteni*, likewise *naišteni*; pret. 2nd sg. *paitta/paišta* (beside

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[135] J. Schindler has reminded me of the possibility that Hittite -*e* here represents merely *\*-ē* (with loss of the final element of a long diphthong). Two facts speak against this. First, note that Hittite reflects the final yod in the corresponding o-grade *\*ōi: ḫaštāi* < *\*h₂ést(h₂)ōi*, etc. Second, when the nom.-acc. *utnē* is generalized as the stem, it behaves just like /ẹ/ < *\*Vi*; i.e., it soon develops a hiatus-filling glide *y: utnē-aš > utneyaš* (see 2.2.5). This again suggests a close /ẹ̄/ reflecting an old *i*-diphthong.

[136] Hitt. *nēa* < *\*néih₁o* shows that the monophthongization of *\*ei* to *ẹ* must have preceded loss of *\*h₁* between vowels: otherwise *\*nei-o > \*neyo > \*nẹ-a > na*; see 2.2.1. This means that one cannot assume a development *\*nóih₁ei > \*noi-ei > \*noyei > \*no-ei > \*nāi*, since the *\*ei* (and also the *\*oi*) would have been *ẹ* before the loss of *\*h₁*. However, given the phonetic quality of the *ẹ* (a 'close' *e* approaching *i* which eventually merges with *i*), it is not implausible that contractions of sequences with *ẹ* as second member produce a long *i*-diphthong *āi* (instead of say *\*ē*). Only in the case of *\*nóih₁ei > \*nẹ-ẹ > nāi* with two like vowels is the outcome surprising. It is possible that in this verb the attested *nāi* for *\*nẹ̄* is analogical (cf. note 139).

[137] Or more likely, *\*-eyei* was replaced by *\*-ayei* (see 2.2.4), then *\*-ayei > \*-ayẹ > \*-a-ẹ > -āi*.

[138] It is quite likely that the second singulars *pešti* and *pešta* represent the regular outcome of *\*pe-ai-*, just like *pēḫḫe* < *\*pe-ai-h₂ei* (with the same assumed deletion of *\*ĕ* bevore *\*a*). However, there are no attestations in OH mss.

pešta),[138] daitta/daišta, likewise naitta; pret. 3rd sg. paiš (later pešta/paišta), daiš, naiš (later naišta), etc.[139]

It is important to point out that the āi in forms like the pret. 3rd sg. cannot be explained from either *$eh_1i$ (Watkins, Idg. Gram. III/1.55) or *$eih_1$ (Oettinger, Stammbild. 405). We have seen that *$eh_1i$ > e /ẹ/: teḫḫe < *$dhéh_1i$-$h_2ei$. The first singular neḫḫi < *$nóih_1$-$h_2ei$ also shows that an i-diphthong with following *$h_1$ gives Hittite /ẹ/. Hittite utnē 'land' < *utnéi makes it unlikely that an inherited lengthened grade *ēi could yield āi either. Finally, the anim. nom. pl. kē 'these' < *k̂oi shows that i-diphthongs also become /ẹ/ in monosyllables, falsifying Oettinger's suggestion, Stammbild. 364, that paiš, daiš and naiš show a special treatment of *-$Vi(h_1)$ in monosyllables.[140]

An entirely different set of contractions is represented by ā-e to āi, which probably occurs within the historical period of Old Hittite in denominative verbs in āye, āyo (see 2.2.2). In Old Hittite we still find spellings such as tar-ma-e-mi and a-ru-wa-en-zi (analogical after the singular a-ru-wa-ez-zi), which may well represent uncontracted /tarmā-emi/ and /arwā-entsi/ versus later ḫa-an-da-a-iz-zi and ḫa-an-da-i-it-ta-ri showing /hantāi-/. However, occasional OH spellings like li-in-ga-en for /lingāin/ 'oath' show that -a-e(C) may also represent /āi/ in Old Hittite (see 4.2.3 below). Therefore one could read tar-ma-e-mi and a-ru-wa-en-zi already as /tarmāimi/ and /arwāinsti/. One could argue against the spellings in -Ca-e-mi and -Ca-en-zi representing /āi/ on the basis that we find no spellings -Ca-i-mi or -Ca-in-zi. However, the total number of spellings in -Ca-e(C)- is itself so small that this is hardly conclusive. In sum, the preservation of uncontracted ā-e in Old Hittite is highly plausible, but not provable beyond doubt.[141]

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[139] In many ḫi-verbs an expected present third singular in -i (for phonologically regular -ẹ) is replaced by -āi from the ḫi-verbs in final -i: cf. OH wašti vs. later waštai. Likewise we find išḫāi 'binds' for *$išḫ(y)ẹ$/išḫi < *$h_2í$-$sh_2y$-ei and dāi 'takes' for *dẹ < *$dh_3e$/o-i.

[140] Oettinger's reading and derivation of /memesta/ 'spoke' < *me-mais-t are false. I know of no OH examples, but MH manuscripts show memišta with unambiguous i (ABoT 65 Rs 3, KUB XIV 1 passim). Whatever the details of the formation, we are surely dealing with a zero-grade of the root conditioned by the reduplication: *mé-$mh_1i$-.

[141] The diphthong āi is often further reduced to ẹ in the iteratives of -ā(i)-stems: cf. OH ḫatreške- < ḫatrā(i)- 'write'. This reduction, which is not regular, is surely due to the particular environment of the iterative stem (relatively long words and original accent on the following *-sk̂é-): see Oettinger, Stammbild. 360, for a similar analysis. The contraction of ḫa-i(n)k- to ḫe(n)k- 'bow' (note 46) is something else. Here we have a secondary sequence of short ă-i contracting to e. This is simply the expected result of a short i-diphthong. Again note that secondary e-i < *$eh_1i$ in teḫḫe also gives e (4.2.1). See also Excursus X.

## 4.2.3 Orthography of *āi*

The long diphthong *āi* /āy/ is spelled variously as *(C)a-i(C)*, *(C)a-eC*, *(C)a-i-iC*, *(C)a-a-i(C)*, *Ca-a-e(C)* and *Ca-a-i-iC*. All of these are already attested in OH manuscripts: cf. *pa-iz-zi*, *pa-i-iz-zi* and *pa-a-ir*; *ta-ma-a-e*, *ta-ma-i-in* (both *KBo* XXV 65 Rs 4–5), *li-in-ga-en* and ᵁᶻᵁ*ma-aḫ-ra-en*; *a-ru-wa-iz-zi*, *a-ru-wa-i-iz-zi*, *pal-wa-a-iz-zi* and *iš-ta-an-ta-a-i-iz-zi*; *da-iš* and *na-i-iš*; *ḫal-za-i* and *ḫal-za-a-i* (both *KBo* XVII 1 II 35 and 37). This distribution of spellings makes it clear that they are all mere variants of one sequence /āy/. Pairs like *ta-ma-a-e* and *ta-ma-i-in* in a single manuscript (reflecting a stem in a long diphthong -*āi*-) make it impossible to distinguish /āy/ spelled -*Ca-a-iC*- and /ayi/ spelled -*Ca-i-iC*-.

I state this explicitly because this hypothesis is suggested by the apparent contrast in the OH manuscript *KBo* XXII 2 between *da-a-ir* 'they took' and *da-i-ir* 'they placed'. The derivation of the former is clear: stem *da*- plus pret. 3rd pl. ending -*ēr* (< *ēre), contracted to *dāir* /dāyr/. In the case of *dāi*- 'place' the attested form is obviously an innovation, since other *ḫi*-verbs in final -*i* show zero-grade of the root in the pret. 3rd plural: *p(i)yēr* 'they gave', *išp(i)yēr* 'they were satisfied', etc. The most plausible explanation for *da-i-ir* is that it consists of the strong stem *dāi*- taken from the pres. 3rd singular (see 4.2.2 above) plus the ending -*ēr*: hence *dāi-ēr* which would give /dāyēr/. Since *ir* can be read *er*, *da-i-er* could easily represent /dāyēr/. It is also possible to read /dāyir/, assuming unaccented /ē/ to /i/.

There is a problem with this analysis, however, in addition to the apparent equivalence of -*Ca-a-iC*- and -*Ca-i-iC*- elsewhere in Old Hittite. The same manuscript *KBo* XXII 2 spells 'they went' as *pa-a-ir*. This form must also be secondary, since both *pe-(h₁)ey-ēr* (full grade) and *pe-(h₁)y-ēr* (zero-grade) would have led to *pēr* with loss of old intervocalic *y and contraction of the *e's*. Again the only plausible source for *pa-a-ir* 'they went' is the strong stem *pāi*- plus the ending -*ēr*.[142] Note that this is exactly parallel to *da-i-ir* < *dāi + ēr*. The results of these two must be the same, arguing that once again *Ca-a-iC* and *Ca-i-iC* are equivalent, both /āy/. This result is easily accounted for by assuming that the renewal of the preterite third plural with the strong stem antedates the loss of intervocalic *y in pre-Hittite: *pāy-ēr, *dāy-

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[142] Generalization of the strong stem of *pāi*- to the plural is proven by *paiweni*, *paitteni*, etc., and by *pānzi*, which reflects secondary *pāy-anzi* with loss of intervocalic *y. The original third plural *pe-(h₁)y-enti* would have led with loss of intervocalic *y to *pě-anzi*, then *panzi* with short *ă* (see 2.2.1).

*ēr* > *\*pā-ēr, \*dā-ēr* > (with contraction) *pair, dair.* 'They placed' and 'they took' are homophonous (/dāyr/), as their overall spelling in Hittite suggests.[143]

## 5. Conclusion

In summarizing the developments of PIE *\*w* and *\*y* in Hittite, it seems useful to attempt a relative chronology of the changes. I stress in advance, however, that our fragmentary knowledge of the other Anatolian languages, especially Palaic, makes any statements about Common Anatolian provisional.

(1) It is likely that the monophthongization of the short *i*-diphthongs to *ẹ* and the short *u*-diphthongs to *u* is Common Anatolian (but see note 84). The change of *\*Vi* to *ẹ* must in any case precede the loss of intervocalic *\*h₁* (see note 136). The dating of PIE *\*ēi* > *ẹ̄* is quite uncertain, as is the very outcome of PIE *\*ēu* (for possible (!) Hitt. *u* < *\*ēu* see 4.1.1).

(2) The equation of Hitt. *ēkt-* and CLuv. *aggati-* 'hunting net' indicates that the loss of initial *\*y* before *\*e* is Common Luvo-Hittite (note 26). It is also likely, but not assured, that Luvian and Hittite share the general loss of intervocalic *\*y* (Excursus VII).

(3) Since the new sequences of *uwV* produced by loss of intervocalic *\*y* and *\*h₁* remain *uwV* and do not become *umV,* these changes must be later than the dissimilation of *w* to *m* next to *u.* This means that if loss of intervocalic *\*y* is Common Luvo-Hittite (see (2) above), then the dissimilation of *w* to *m* is also necessarily Common Luvo-Hittite. I stress again that present Luvian evidence for such a change is less than sure (see note 58).

The loss of intervocalic *\*h₁* may be Common Luvo-Hittite or pre-Hittite (see Excursus III, end). In any case:

(4) Secondary sequences of short vowels plus *i* created by loss of *\*h₁* behave in Hittite like original short diphthongs: *\*a(h₁)i* > *ẹ* (notes 46 and 141) and *\*e(h₁)i* > *ẹ* (4.2.1).

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[143] 'They took' is spelled predominantly *da-a-ir* at all periods, and this is also the most frequent spelling for 'they placed' (already OH: *KBo* XXII 1 Vs 4). The spellings *da-i-e-er* and *da-a-i-e-er* for 'they placed', well attested from MH, may well represent an alternate form /dāyer/, which would be another renewal by the strong stem *dāi+ ēr,* this time within the historical period: hence the preserved intervocalic *y.*

(5) Secondary sequences of vowel plus ẹ created by loss of *$h_1$ or *$y$ become a long diphthong $\bar{a}i$ in Hittite (4.2.2). Secondary *$\bar{a}$-$u$ becomes a long diphthong $\bar{a}u$ (4.1.2).

(6) Hitt. *tāya-* 'steal' with preserved $y$ shows that the loss of *$h_2$ between a vowel and *$y$ must follow the loss of intervocalic *$y$ (2.2.2). This change cannot be dated further.

(7) The loss of *$w$ between a dental stop and *$o$ is specifically pre-Hittite: contrast Hitt. *idālu-* 'evil' with CLuv. *adduwali-* 'idem' (3.1.2). Note that this contrast plus that between Hitt. $d\bar{a}n < $ *$dwoyom$ and *du-wān* /dwān/ < *[dwām]*/dweh₂m/ argue that /o/ and /a/ were kept distinct into pre-Hittite! This implies, of course, that inherited *$\bar{o}i$ and *$\bar{o}u$ became $\bar{a}i$ and $\bar{a}u$ only in pre-Hittite.

(8) Probably within the period of Old Hittite, the secondary sequence $\bar{a}$-$e$ created by loss of *$y$ contracts to a long diphthong $\bar{a}i$ (4.2.2 end). Under special circumstances the $\bar{a}i$ is further reduced to ẹ (note 141).

# The Vowels *e* and *i* in Hittite

## 1. Introduction

1.1. It is widely held that the vowels *e* and *i* merge in Neo-Hittite. This view is reflected in the decision of the editors of the newly inaugurated *Chicago Hittite Dictionary* to treat *e* and *i* as equivalent for purposes of alphabetization. Their explicit justification for this procedure is found in the *CHD* 3/1 (1980) xvi: 'It is well-known that the vowels *e* and *i* often interchange in the spelling of Hittite words. It is quite likely that the two vowels, still kept distinct in Typical Old Script, began to merge in later Old Hittite, and certainly had completed their merger by the Empire period.'

A similar viewpoint is expressed by Otten-Souček, *StBoT* 8 (1969) 50: 'Andererseits hat der Schreiber wohl versucht, die anfänglich in der Sprache vorhandene phonologische Opposition der Phoneme /e/ und /i/ durch die Pleneschreibung von *e* zum Ausdruck zu bringen. Diese Schreibung findet sich weitgehend auch in den späteren Texten, obwohl man schon für die Zeit der Niederschrift der vorliegenden Fassung keine Opposition /i: e/ mehr als sprachwirklich annehmen kann, die wir beim Archetypus wohl noch voraussetzen müssen.'

Even a cursory survey of Neo-Hittite texts raises doubts about the merger of *e* and *i*: e.g., the verbs *ēš-* 'be' and *ēš-* 'sit' continue to be written uniformly with *e,* and Mursili II distinguishes *īt* 'go!' from *ēt* 'eat!'. Note that the statement of Otten and Souček admits the existence of such spellings in Neo-Hittite, but implies that they are not to be taken seriously. We are not told why the same spellings which show a phonemic opposition in Old Hittite should not indicate the same opposition in Neo-Hittite. Presumably, the reason is the 'well-known' interchange of *e* and *i* spellings cited by the *CHD*. This line of reasoning is made explicit in Sturtevant-Hahn, *CGr²* (1951) 19, where examples such as *ēš-* 'be' are termed 'traditional spellings' and the merger of *e* and *i* in Neo-Hittite is assumed on the basis of such alternates as *pí-di, pí-e-di* and *pí-e-te* or *ku-en-zi* and *ku-i-en-zi.*

The proposed merger of *e* and *i* has not been universally accepted. Neu, *StBoT* 18 (1974) 38, note 6, citing such consistent *e*-spellings as *ēš-* 'be', suggests that any final judgment on the relationship of *e* and *i*

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is premature, and that future investigation should reckon with the possibility of different developments in different environments. Oettinger, *Die Stammbildung des hethitischen Verbums* (1979) passim, assumes a contrast between *e* and *i* for all periods of Hittite. However, his global survey of the spellings for *e, Stammbild.* 533 ff, is inadequate to demonstrate the phonemic opposition of *e* and *i* for Neo-Hittite, particularly since he does not systematically contrast the spellings for *e* with those for *i*.

In order to determine the true status of *e* and *i* in Hittite, two steps must be taken. First, the various spellings involving *e* and *i* must be judged according to their chronological distribution. No valid generalizations concerning *e* and *i* can be achieved by comparing indiscriminately spellings from OH manuscripts, NH manuscripts of OH texts, NH manuscripts of NH texts, etc. Second, mere orthographic variations involving *e* and *i* which are due to the nature of the Akkadian syllabary must be sorted out before any conclusions can be drawn about genuine linguistic contrast or variation between *e* and *i*.

1.2. The crucial role of the relative chronology of sources in determining the features of Hittite grammar should no longer be open to question. I may cite as an example the alternation between *-(i)ya-* and *-i(e)-* in Hittite *\*-ye-/-yo-* verbs, which was once thought to reflect a contraction of *-(i)ya-* to *-i-* or *-e-*: see e.g. Friedrich, *HE* I² (1960) 27. The chronological distribution of the spellings has since shown that we are dealing rather with a replacement of OH *-(i)ye-* by NH *-(i)ya-*: see Carruba, *Kratylos* 7 (1962) 157 ff, *Sprache* 12 (1966) 79 ff, and Oettinger, *Stammbild.* 25 ff.[1]

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[1] Further examples are plentiful. In my dissertation, 'Ablative and Instrumental in Hittite' (Harvard University, 1977), I have shown that the apparent free variation of ablative and instrumental in certain usages does not exist. In Old Hittite the two cases are functionally distinct. Later, the ablative progressively replaces the instrumental in all functions.

The use of the enclitic possessive pronoun in *-e/it* with the dative-locative was described by Houwink ten Cate, *RHA* 24 (1966) 123 ff, and used by Josephson, ibid. 133 ff, as the basis for conclusions about the history of the pronominal *-t-* element. This usage, however, is attested only in later copies of OH texts: see Otten, *StBoT* 17 (1973) 55. A survey of all relevant facts shows that this feature is merely a misuse of the enclitic possessive by NH copyists who no longer understood its usage: see my dissertation, p. 259 ff.

Finally, Oettinger, *Die Stammbildung des Hethitischen Verbums* (1979) passim, has shown that the diachronic analysis of many Hittite verbs must be revised in light of their OH paradigms, which often are not those listed in previous handbooks.

It is also a well-established principle that our primary data for Old Hittite must be that material which is attested in Old Hittite manuscripts. This is particularly true for matters of orthography, since it is clear that copyists are inconsistent about preserving the original spellings of the older archetypes (compare, for example, the spellings of the NH copy *KUB* XXIX 1 with those of the OH duplicate *KUB* XXIX 3). The corpus of OH manuscripts used here consists of those listed by Oettinger, *Stammbild.* 574 ff, plus those now published in *KBo* XXV (the latter are conveniently available in transliteration by Neu, *StBoT* 25).[2]

While the primacy of OH manuscripts in determining the features of Old Hittite is commonly recognized, less attention has been paid to forming a reliable corpus for Middle and Neo-Hittite. The list of MH manuscripts offered by Oettinger, *Stammbild.* 576 ff, expressly includes MH copies of OH texts. It is clear that the latter cannot be safely used for determining the linguistic features of Middle Hittite. Furthermore, none of the ritual texts listed there can be dated with any certainty as MH compositions. Therefore the MH corpus used here consists only of numbers 28–275 and 375 of Oettinger's list.

Even this reduced MH corpus must be used with caution. First, some of the manuscripts included may also be copies of OH texts. We have no guarantee that MH manuscripts of 'protocols' or 'instructions' are MH compositions (e.g. nos. 251, 262, 271). Second, the boundaries between Old and Middle Hittite and between Middle and Neo-Hittite are not yet clearly defined, and the assignment of certain texts (or manuscripts) is still open to debate.[3] Fortunately, the MH corpus is not cru-

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[2] As noted by Oettinger himself, the dating of Hittite manuscripts is an ongoing process, and further research has required some modifications of his list. Following Neu, *StBoT* 25 (1980) XIV, note 4, I have excluded *KBo* XVII 44 + (*CTH* 744) from OH manuscripts. On the other hand, I have also followed Neu in including the following as OH manuscripts (contra Oettinger): *KBo* XVII 17 (*CTH* 412), *KUB* XLIII 24 (*CTH* 523), *KBo* XX 21 (*CTH* 627), *KBo* XVII 12 and 45 and XX 17 (*CTH* 665), *KBo* XVI 84, XVII 8 and XX 25 (*CTH* 670), *KUB* XLIII 27 (*CTH* 733), *KBo* XVII 50 (*CTH* 744) and *KBo* XVII 35 (*CTH* 750). I have also excluded *KUB* XXXVI 98 b + c (*CTH* 18), which is not designated as an OH manuscript by anyone except Oettinger and whose published autograph shows clearly NH sign shapes, and *KUB* XXXVI 107 (*CTH* 39), which is erroneously listed by Oettinger under both OH and MH manuscripts!

[3] See for example the proposal by Neu, *KZ* 93 (1979) 64 ff, that the Hukkana Treaty of Suppiluliuma I is Middle Hittite. This will be discussed further in note 8. On the general problem of dating texts and manuscripts see also S. Heinhold-Kramer et al., *Probleme der Textdatierung in der Hethitologie* (1979), and the discussion by Neu, *StBoT* 25 (1980) XIII f.

cial for our present purposes, since we would expect a priori that the Middle Hittite situation either agrees with that of Old Hittite, agrees with that of Neo-Hittite, or shows a transition between the two. The evidence of Middle Hittite is thus of a corroborative nature.

In determining the linguistic features of Neo-Hittite, it is of crucial importance to give primary status to those texts whose composition may be safely attributed to the Neo-Hittite period. NH manuscripts of ritual, festival or oracular texts whose date of composition cannot be determined by non-linguistic factors are of little value in establishing the grammar of Neo-Hittite.[4] The NH corpus used here therefore consists exclusively of historical texts whose NH composition is assured.

In treating a matter of orthography, we must further restrict even this limited corpus, because there is clear evidence of changes in orthography within the relatively long Neo-Hittite period.[5] This means that a very late copy of an earlier Neo-Hittite text (e.g., of Suppiluliuma I or Mursili II) is no more reliable than a NH copy of an OH text. Making fine distinctions in the relative age of Neo-Hittite manuscripts is still difficult, and I for one am not fully convinced of the validity of dating manuscripts based on the ratio of 'older' to 'newer' sign variants (see e.g. Neu-Rüster, *StBoT* 21 (1975) 4–7). The introduction of fur-

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[4] NH manuscripts which are (or may be) copies of older texts cannot be used as primary evidence for Neo-Hittite, because the copyists may not only take over archaic features from the archetypes, but also misuse and distort them. See the example of the enclitic possessives in note 1. For an example involving *e* and *i*, I may cite the NH manuscript *KUB* XXIX 1, which is a copy of an OH text (assured by the fragmentary OH manuscript *KUB* XXIX 3). *KUB* XXIX 1 does indeed show a widespread interchange between *e* and *i*, but this cannot be used as evidence that *e* and *i* had merged in Neo-Hittite. As we shall see, there was some change in the distribution of *e* and *i* from Old to Neo-Hittite. Therefore a NH copyist looking at an OH manuscript would not understand the rationale for the distribution of *e* and *i* which he found. His attempt to imitate the older situation would then lead to linguistically unreal forms which never existed, just as in the case of the enclitic possessive in *-it* with the dative-locative.

[5] To cite two examples: H. Hoffner has indicated to me that the stem *kururiyaḫḫ-* 'be hostile' is spelled *ku-u-ru-*° in manuscripts before the era of Muwattalli, but *ku-ru-*° thereafter (including later copies of the Annals of Mursili II). This statement requires some modification, in that *KBo* X 12 II 19 and *KBo* XIX 64a IV 36, shown by sign shapes to be late manuscripts of earlier texts, do have the plene spelling. However, it remains true that the shorter spelling *ku-ru-*° is found only in later manuscripts. That a change has taken place cannot be doubted. Similarly, in NH historical texts before Hattusili III, the ablative ending is spelled predominantly *-(a)z* after vowels and ideograms (132x vs. *-za* 48x). Beginning with Hattusili III, the preferred spelling is *-za* (108x vs. *-(a)z* 39x). Further study will undoubtedly reveal further diachronic 'isoglosses' of this sort. See also note 8.

ther new variants in a few signs at the very end of the Neo-Hittite period does permit us to detect at least some late copies: see the shapes of *KI* and *ŠAR* in Spalte IV of *StBoT* 21 (second variants). To my knowledge, these 'newest' variants do not occur before the late thirteenth century. On this basis (and other criteria such as *kururiyaḫḫ-* cited in note 5), I have eliminated certain manuscripts of early NH historical texts. It should be clear, however, that this procedure only excludes the most obvious copies. A copy of a text of Suppiluliuma I or Mursili II made at the time of, say, Muwattalli or Hattusili III would still slip through this screening. It is thus virtually certain that even the limited corpus used here includes a few later copies, which may contain linguistically unreal forms.

I have used the following corpus for Neo-Hittite (the numbers are again those of Laroche, *CTH*): 40, 42.B, 43, 51–52, 57, 58, 61, 62, A, B, D, 63. B–G, 67, 68. A, D, E, I, 69. C, D, 70, 71, 76, 81–90, 97, 98, 105, 106, 121–126, 154, 171, 176–178, 225, 255, 256, 378, 380–384, 569, 585.[6] Two additional points: first, I have included prayers, to make the corpus as large as possible. However, this is a genre where the reuse of older materials is well-attested,[7] so data from these texts must be used with caution. Second, we have already seen some examples of changes in the language (or orthography) from Suppiluliuma I to Suppiluliuma II. In surveying the spellings for *e* and *i*, I therefore initially subdivided Neo-Hittite into five periods: Suppiluliuma I,[8] Arnuwanda II-Mursili

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[6] For the exclusion of *CTH* 42.A see Neu, *KZ* 93 (1979) 67. In *CTH* 44, *KUB* XIX 25 shows newer *LI, AK* and *IK,* and XIX 26 newer *LI, IK* and *URU,* which would hardly be possible in a manuscript of Suppiluliuma I. The manuscript of *CTH* 49, *KBo* X 12, is 13th-century: note the forms of *ŠAR* (II 39) and *SAG* (II 41). In *CTH* 51, *KUB* XXI 18, 17 has the very late *KI.* In Mursili's Annals, *CTH* 61, *KBo* XIV 20+ has *kururiyaḫḫ-* without scriptio plena. So does copy C of the Duppi-Tešub Treaty (*CTH* 62), copy A of *CTH* 63, and copy B of the Kupanta-ᵈKAL Treaty (*CTH* 68). Copies C and H of the latter have the very late form of *ŠAR* (*KBo* IV 3+ I 32 and *KUB* VI 48 III 7 respectively). Copy A of *CTH* 69 (Manapa-Datta) also has the very late *ŠAR* (*KUB* XIX 49+ I 67), while B has the very late *KI* (XIX 50+ II 10.11). *CTH* 379, *KUB* XXXI 121+ IV 21, shows the late *ŠAR,* while copy B of *CTH* 381 has the very late forms of both *ŠAR* and *KI.*

[7] It is well established, e.g., that the prayer of Mursili II to the Sun-goddess of Arinna uses material from older prayers to the Sun-god: see Gurney, *AAA* 27 (1940) 1 ff, and Güterbock, *JAOS* 78 (1958) 244 ff, and most recently in *Frontiers of Human Knowledge* (Uppsala: 1978) 125 ff.

[8] My listing of Suppiluliuma I under 'Neo-Hittite' does not imply a rejection of Neu's arguments, *KZ* 93. 64 ff, for 'Middle Hittite' features in the Hukkana Treaty. Much work remains to be done, however, on drawing boundaries between the successive synchronic stages of Hittite. If such divisions are not to be wholly arbitrary, then presumably they

II, Muwattalli, Hattusili III, Tuthaliya IV-Suppiluliuma II. Subsequent investigation has shown that in fact some changes involving $e$ and $i$ did occur within the Neo-Hittite period.

1.3. The entire question of the status of $e$ and $i$ in Hittite is complicated by the fact that the Akkadian syllabary used by the Hittites is ill-suited for distinguishing $e$ and $i$ unambiguously in all positions. There are separate signs for the vowels $e$ and $i$, but in the case of CV and VC sequences there are only a limited number of sets contrasting $e$ and $i$. In many instances a single sign may be read as either $C_1e$ or $C_1i$ (or $eC_1/iC_1$). The situation is summarized in the following table:

| Single Sign Ce/i | Separate Ce/Ci | Single Sign e/iC | Separate eC/iC |
|---|---|---|---|
| DE/I | ḪÉ vs. ḪI | E/IB/P | EL vs. IL |
| GE/I | ME vs. MI | E/ID/T | EN vs. IN |
| KE/I | NE vs. NI | E/IG/K | EŠ vs. IŠ |
| LE/I | ŠE vs. ŠI | E/IḪ [9] | |
| PÉ/Í | TE vs. TI | E/IM | |
| RE/I | ZÉ vs. ZI | E/IR | |
| | | E/IZ | |

The ambiguity created by the signs in the first and third colums (a spelling PÍ-IR is readable as /pir/ or /per/) leads to the Hittite practice of adding the vowel sign $e$ to indicate that a preceding Ce/i sign or fol-

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must be based on the relative number of features shared or not shared by successive stages of the language. That is, we should make the major divisions at those points where we find the greatest number of changes. Thus the reclassification of the texts of Suppiluliuma I to Middle Hittite would require not only that they share certain features with Middle Hittite, but that they share more features with Middle Hittite than with later Neo-Hittite. I am not yet persuaded that this is the case. E.g., in the use of -za in nominal sentences with the first or second person (see Hoffner, JNES 23 (1969) 225 ff), the Hukkana Treaty agrees with later Neo-Hittite, not Middle Hittite: cf. KBo V 3 IV 32 with -za vs. KUB XVII 21 IV 5 (CTH 375) without. Likewise, Hukkana shows only the later 2nd sg. ištamašti 'you hear' (5x) vs. the older ištamašši in the MH Sunassura Treaty (KUB XXXVI 127 Vs 14) and the Prayer to the Sun-goddess of Earth (KBo VII 28 Vs 9. 10; OH text, MH ms.). As noted above, some further subdivision of the long Neo-Hittite period seems necessary in any case. By retaining the period of Suppiluliuma I under the rubric 'Neo-Hittite', I am by no means implying a uniformity of language from Suppiluliuma I to Supiluliuma II.

 [9] This same sign, of course, can also stand for AḪ or UḪ.

lowing *e/iC* sign is to be read with the value of an *e*: e.g. *PÍ-e-ra-an* to indicate /pĕran/, *e-IT-mi* to indicate /ēdmi/. This use of the vowel sign *e* has several further consequences:

1.3.1. A sequence of an ambiguous *Ce/i* sign plus an *e* sign or unambiguous *eC* sign may represent /Ce/, /Cē/ or /Cyĕ/. The choice between these interpretations can be made only on morphological and etymological grounds.

When the sequence *Ce/i-e(C)* alternates within a paradigm with *Ci-ya* or *Ci-aC*, it is to be interpreted as /Cye/, parallel to the unambiguous /Cya/ of the alternate forms: e.g. *ḫu-la-a-LI-e-mi* = /hulalyemi/ based on *ḫu-la-li-an* = /hulalyan/ etc. (likewise Oettinger, *Stammbild.* 25 and 545).[10]

If the spelling *Ce/i-e(C)* is constant, or alternates only with *Ce/i-(e/iC)*, then we assume a sequence /Cĕ/ or /Cē/. Since the presence of the vowel sign *e* here may be motivated by the desire to mark the quality of the vowel, there is no way to tell whether the scriptio plena is also functioning in one of its other uses (to mark vowel length or accent).[11]

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[10] Neu, *StBoT* 25 (1980), generally transcribes all instances of ambiguous *Ce/i* signs followed by signs containing *e* as *Ce-e(C)*: not only *pé-e-ra-an,* but also LÚ.MEŠ*ḫa-a-pé-(e)-eš, ḫu-la-a-le-e-mi,* etc. The stated goal of this procedure, ibid. XIII, is to achieve as high a measure of 'objectivity' as possible, free of 'subjective linguistic analyses'. Unfortunately, to choose either *Ce-e(C)* or *Ci-e(C)* as a transliteration unavoidably involves linguistic analysis. His transcriptions inevitably imply an interpretation /habes/, /hulalemi/ parallel to /peran/. Other forms of the paradigm show that this implied analysis is wrong: we must read /habyēs/, /hulalyemi/. 'Objectivity' could be better achieved by printing the ambiguous signs in capitals: e.g. *ḫa-RI-e-mi.* Since Neu himself employs this device a handful of times, it is hard to see why he does not follow it consistently. This practice is followed here in introducing ambiguous spellings, to avoid the awkward use of *e/i*. The reader must bear in mind, however, that the spelling *LI* means merely 'the sign *li/le*'. The choice of *i* in the cover spelling does not prejudice the interpretation of the sign as containing /e/ or /i/.

[11] This is admitted even by Oettinger, *Stammbild.* 537, note 16, although elsewhere, ibid. 233, he asserts that the only function of scriptio plena is to mark vowel length (except for *u*?!). Oettinger does not recognize the use of scriptio plena to mark the accent, although this is well-established by such examples as *te-e-kán* /dégan/ vs. *ták-ni-i* /dagní/, *ták-na-a-aš* /dagnás/ etc. This forces him to view all examples of scriptio plena with an unambiguous *Ce* sign as showing a long vowel: *te-e-kán* = /dēgan/, *ne-e-pí-iš* = /nēbis/, etc. These must then be explained by an ad hoc rule by which 'a stressed short vowel in the first syllable of a two-syllable word is lengthened in an open syllable before a short vowel' (i.e. $*\breve{V}$-$C_1\breve{V} \to \bar{V}C_1\breve{V}$). This peculiar rule is falsified by examples like *tue-kka-* 'body' < *twék-o-* and *šakki* 'knows' < *sókei.* Since PIE voiceless stops are 'lenited' after a stressed long vowel (see note 12), if the *e* and *a* in these words were long, they would appear as *\*tweka-* and *\*šaki.* Thus the frequent orthographic alternation *Ce-e-:*

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The choice between /Cĕ/ and /Cē/ can be made, if at all, only on indirect evidence.[12]

1.3.2. If we find alternates Ce/i-e and Ce/i, or Ce/i-e-e/iC and Ce/i-e/iC, both must be read either as /Cĕ/ or /Cyĕ/: e.g. PÍ-ra-an alternating with PÍ-e-ra-an points to /peran/ for both (likewise already Neu, StBoT 18 (1974) 38). Since the Ce/i signs may in principle always be read as /Ce/, a graphic alternation such as PÍ-ra-an, PÍ-e-ra-an is no evidence for a linguistic alternation (or free variation) between e and i. In the absence of any evidence to the contrary we can and should read pé-ra-an, pé-e-ra-an = /peran/. Likewise, a spelling ḫu-la-li-IZ-zi may not be used as evidence for a 'contraction' of (i)ya or (i)ye to i. In view of the alternate ḫu-la-LI-e-IZ-zi, we should read rather ḫu-la-li-ez-zi, ḫu-la-li-e-ez-zi = /hulalyetsi/.[13]

1.3.3. On the model of Ce/i-e for /Ce/, we also find occasional examples of Ci-e(C) for /Ce/, alternating with Ce-e(C). That is, even where there is an unambiguous Ce sign, /Ce/ may be expressed by Ci-e(C). I stress that this development is already attested in OH manuscripts (including those in 'typical old script'). For example, we find zi-e-ri for /tseri/ 'cup' (KBo XVII 3 IV 30), ga-ni-eš-zi for /gnestsi/ 'recognizes' (KBo VI 2 I 43.46). Alternate spellings like zé-(e)-ri and ga-ne-eš-zi confirm the reading /Ce/ for these examples. The assumption of a genuine alternation /Cye/ vs. /Ce/ is without foundation and at least in the second example highly implausible. In view of this use of Ci-e beside Ce-(e) for /Ce/, it is also unlikely that the hapax spelling ni-ku-uš 'sisters' (KBo XXII 2 Vs 18, OH ms.) versus normal ne-ga- reflects any

Ce- no more indicates a genuine linguistic variation ē: e than the alternation Ce/i-e-: Ce/i- indicates a genuine variation e: i.

[12] For example, we can assume that the e of ú-e-eḫ-zi is long, since a short *ĕ would have become a before *h₂: cf. the plural waḫ(ḫ)anzi. Furthermore, in both weḫun 'I turned' and wekun 'I asked', the 'lenition' of the following ḫḫ and kk to ḫ and k points to a preceding long vowel: see Oettinger, Stammbild. 100, following Eichner, MSS 31 (1973) 79 ff. In other cases, such as ēdmi 'I eat', the reading /ēdmi/ is based merely on comparative evidence (Lith. édmi etc.) and the parallel of weḫ- and wek-, which suggests that the 'acrostatic' present type with strong stem in *ē survived into Hittite.

[13] There is in fact evidence against a contraction to i in these forms. If spellings in -Ci-IZ-zi and -Ci-IT in the third person represented contractions of -(i)ye- to -i-, then we should expect to see the same contraction in the first and second persons where the spelling would be unambiguous: -Ci-mi, -Ci-ši, -Cinun, -Ciš. Since we find no examples such as *wemimi, *wemiši, *weminun, *wemiš, there is no basis for assuming third singulars such as *wemit.

genuine variation. It is rather a truncated (probably defective) version of *ni-e-ku-uš* /negus/ in the very next line (Vs 19) of the same manuscript.

1.3.4. It is clear from the sign table above that for a majority of sequences /eC/ there is only a single ambiguous sign *e/iC*. In only three cases is there a contrast of *eC* versus *iC*. Thus in most sequences of /CeC/ the coloring of the vowel is determined by the initial *Ce* sign (or by a scriptio plena with *e*). Everyone, to my knowledge, reads *še-IR* as *še-er* (/sěr/ or /sēr/) and *KI-e-IT* as *ke-e-et* (/kěd/ or /kēd/). The sequences /ěl/, /ěn/ and /ěs/ are normally spelled as expected with the available *eC* signs: *KI-e-el* = *ke-e-el* /kěl/, *ku-en-zi* /gʷentsi/, etc. However, since an initial *Ce* sign or plene spelling with *e* already determines *e* coloring, one also finds occasionally *Ce-iC* or *Ce-e-iC* for /CeC/: *ḫa-an-ne-iš-ni* (*KBo* VI 2 II 13, OH ms.) beside usual *ḫa-an-ne-eš*- for /hannes-/; *ku-e-in-[ ]* (*KBo* IX 73 Vs 15) beside usual *ku-(e)-en*- for /gʷen-/. I emphazise again that this phenomenon is already found in OH manuscripts including 'typical old script'. It is analogous to the occasional use of *Ci-e(C)* beside *Ce-(e)* for /Ce/ (1.3.3).

1.3.5. Just as scriptio plena with *e* is used to indicate *e* coloring of an ambiguous *Ce/i* or *e/iC* sign, so also scriptio plena with *i* is used to indicate *i* coloring. The spelling *i-it-te-en* (*KBo* VI 2 III 19, OH ms.) beside usual *IT-te-en* or *IT-ten* is no evidence for variation between a long and short vowel. The plene writing merely assures a reading /iten/ with an *i* vowel. Likewise *ḫal-ma-aš-šu-i-iz* (*KUB* XXIX 3 I 4; OH ms.) beside usual °*-šu-IT-* (*KBo* XVII 1 II 28 etc.). Similarly, the regular OH spellings *KI-i* 'this' (nom.-acc. sg. nt.) and *KI-e* 'those' (nom. pl. anim. and nom.-acc. pl. nt.) indicate in the first instance a qualitative contrast /ki/: /ke/. Whether either vowel is long must be determined by means other than orthography.

1.3.6. It follows from the preceding that genuine linguistic contrast (or variation) between /CeC/ and /CiC/ can only be proven by an orthographic contrast (or variation) between *Ce* and *Ci*, *eC* and *iC*, or *Ce/i-e-(e/iC)* and *Ce/i-i-(e/iC)*. As will be shown below, most Hittite words containing *e* and *i* show such a consistent contrast at all periods of the language, based on texts which are assuredly original compositions of each period. Variation between *e* and *i* is also attested at all periods, including Old Hittite (and 'typical old script'). Delimiting the environment and nature of this variation will be one of the tasks of the study which follows.

It is also clear from what has been said that determining an /e/ or /i/ reading for sequences involving ambiguous *Ce/i* and *e/iC* signs depends on the existence of alternate spellings with scriptio plena or with unambiguous *Ce, Ci, eC* and *iC* signs. Where the latter are lacking, it may be impossible to determine whether we should read /e/ or /i/. Nevertheless, the existence of such indeterminate cases (even in substantial numbers) does not justify the conclusion that /e/ and /i/ do not contrast.

1.4. Following the principles outlined above, the survey of *e* and *i* in Hittite which follows is organized chronologically into Old, Middle and Neo-Hittite periods. Within each period I will treat first forms with consistent *e*, then those with consistent *i*, and finally those which seem to show genuine variation between *e* and *i*. Even a cursory survey of the material shows that in addition to synchronic variation, there are also changes in the status of *e* and *i* from Old to Neo-Hittite. Since both the synchronic and diachronic variations appear to be limited in scope, it is likely that they are in some way conditioned. One obvious source of conditioning is the phonological environment (word position, relation to the accent, surrounding phonemes). Furthermore, the Hittite sequences spelled *e* and *i* by all accounts have several PIE sources: *$*e$, $*\bar{e}$, $*i$, $*\bar{\imath}$, $*e/ih_1$, $*ei$, $*oi$, $*ai$. It is by no means certain that the product of all these was simply two vowels *e* and *i*. We may be dealing with several different vowels in terms of both quantity and quality, which could then undergo different changes within the historical period. I have therefore tried to organize the material according to both the immediate phonological environment and the PIE sources of *e* and *i*.[14]

## 2. *e* and *i* in Old Hittite

### 2.1. Consistent *e* in Old Hittite

#### 2.1.1. OH *e* < PIE *$*\breve{e}$

##### 2.1.1.1. Examples of *e* < *$*\breve{e}$ in Root Syllables

*eka-* 'ice' < *$*yégo-$, *eku-/euk-* 'drink' < *$*eg^wh-$, *ērman-* 'sickness' < *$*(h_1)érm\n̥-$,[15] *ēš-* 'be' < *$*h_1es-$, *ḫuek-* 'slaughter' < *$*h_2weg-$, *ḫuek-* 'con-

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[14] In citing root etymologies which are given in standard handbooks such as Friedrich, *Hethitisches Wörterbuch,* Tischler, *Hethisches Etymologisches Glossar,* and Oettinger, *Stammbild.,* I have not thought it necessary to give individual references.

[15] Hitt. *ērman,* gen. *ērmaš* 'sickness' reflects a proterokinetic *men*-stem: *$*ér-m\n̥$, *$*r̥-méns$. The original oblique stem *$*arman-$ is preserved in the derivative verb *armaniya-* 'be

jure' < *$h_2$wegh-, ḫuett(iya)- 'pull' < *$h_2$wedh$_2$-,[16] kuen- 'kill' < *$g^when$-, genu- 'knee' < *ĝénu-, mēk(ki)- 'much' < *meĝh$_2$-, mēni-/mena- 'face, cheek' < *men-,[17] mer- 'disappear' < *mer-, nepiš- 'heaven' < *nébhes-, pēran 'before' < *per-, pēru- 'rock' < *pérwr̥, pēda- 'ground; place' < *pédo-, šēr 'above' < *seri,[18] šeš- 'sleep' < *ses-, ša/emen- 'disappear, withdraw' < *smen-, tēkan- 'earth' < *dhéĝhōm, tēpu- 'a little, few' < *dhébhu-, tuekka(nt)- 'body' < *twek-, wemiya- 'find' < *u+em-, wen- 'futuere' < *wen-,[19] wešš- 'wear' < *wes-.

Orthographical notes: beside e-er-ma-a(n) (KBo XVII 1 III 11) the ambiguous IR-ma-a(n) (KBo XVII 3 I 6) must also be read er-ma-a(n) (1.3.2). Likewise ḫu-e-ek- and ḫu-ek- 'slaughter' (KBo XVII 3 III 14 and XVII 1 I 41), ḫu-e-ek- and ḫu-ek- 'conjure' (KUB XXXI 143 II 19.29 and VIII 41 II passim), and ḫu-e-et-ti-(ya)- beside ḫu-et-ti-ya- (KUB XXIX 30 III 6 and XXIX 36 IV 15). 'Knee' is attested thus far in

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sick'. Etymologically, ērman may be related to Alb. jerm 'daze, stupor, delirium, lack of complete consciousness caused by fever, sickness, etc.' (see Kiči, Albanian-English Dictionary (1976) 127, and also Fjalor gjuhës shqipe (1954) 187). The root is that of *($h_1$)er- 'move' in the sense of 'be agitated': see Pokorny, IEW 328 with references.

[16] The connection of ḫuett(iya)- with PIE *wed(h)- 'lead' has been rejected in favor of deriving Hitt. wēdā(i)- 'bring' from *wed(h)-: see e.g. Oettinger, Stammbild. 518, note 12. However, the verb 'bring' is spelled in its oldest attestations (MH mss.) as widā(i)-, and it is cognate with CLuv. widā(i)-. For the derivation of this verb see Excursus II. On the other hand, Hitt. ḫuett(iya)- points to a preform *$h_{2/3}weTh_x$-: the initial ḫ- demands PIE *$h_2$ or *$h_3$, while the non-assibilation of -tt- before y demands another laryngeal after the dental stop. Since a sequence of PIE voiced stop plus *$h_2$ gives double stop in Hittite (cf. mekki- 'much' < *meĝh$_2$- beside Skt. mah- and Grk. mégas), the PIE root could end in a voiced as well as voiceless stop. From the Hittite point of view, then, a PIE *$h_2$wedh$_2$- ist possible. This would also account for other reflexes ascribed to the traditional reconstruction *wed(h)-: Skt. vadhū- 'bride', Lith. vèsti 'lead; marry', OE weotuma 'bride-price' etc., and Homeric -aednos in anáednos 'without bridal gifts' beside éedna 'bridal gifts' (with assimilation of the prothetic vowel in the latter; cf. ónoma 'name' beside Doric énuma < *$h_1n̥h_3$-). For the semantic shift 'pull' > 'lead' > 'marry' compare the reflexes of PIE *deuk-. Peters, Unters. zur Vertretung d. idg. Laryngale im Griech. (1980) 317, note 262, also compares an-áednon to Hitt. ḫuett-.

[17] Eichner, MSS 31 (1973) 79, derives this word by distant metathesis from *ne/oimo-, comparing Skt. néma- 'the one, half', Av. naēma- 'half, side'. It seems easier to derive mena- directly from the *men- 'stick out, protrude' seen in Lat. mentum 'chin'.

[18] This form is often taken to reflect a lengthened-grade (e.g. Oettinger, Stammbild. 542: *sḗr = nom.-acc. sg. nt.), but CLuv. šarri (beside Lyc. hri) points to *šeri: for *éC > aCC in Luvian see Čop, IF 75 (1970) 85 ff. Since there are other examples of loss of final -i in Hittite (īt 'go!' < *idhi, ablative -az < *-ati), it seems preferable to derive all the Anatolian forms from one preform: loc. *séri.

[19] For semantic reasons I prefer to derive this verb from PIE *wen- 'strike' (MWelsh gweint 'I pierced', etc.) instead of *wenh$_x$- 'desire' (Oettinger et al.). Cf. Lith. pìsti 'futuere' < *peis- 'strike'.

Old Hittite only as *GI-nu,* but the frequent later spelling *ge-e-nu* and the absence of any spellings *gi-i-nu* assure a reading /genu-/. The normal spelling of *kuen-* 'kill' is *ku-en-* or *ku-e-en-,* but note in an OH manuscript *KBo* IX 73 Vs 15 already *ku-e-in-* (see 1.3.4). OH manuscripts already show *pé-ra-an* beside *pé-e-ra-an* (see again 1.3.2). In view of the spelling *pé-e-di* (*KBo* VI 2 I 17 etc.) beside *PÍ-di* (*KUB* XXXVI 104 Vs 12), the latter must also be read as /pedi/. There is no evidence for '*i*-umlaut', as suggested by Eichner, *MSS* 31 (1973) 84, note 5. The only OH instance of 'body' is *tu-IK-kán-za* (*KBo* VI 2 II 54), which once again in view of frequent later spellings with *e* and none with *i* can and should be read as *tu-ek-°.* For *tēpu-* note in the same OH manuscript[20] *KBo* XXV 23 Rs 6.7 *te-e-pu-uš* followed by *[t]i-e-pu* (see 1.3.3).

It should be noted that original accent on the *\*ĕ* is assured for most of the cases above and is likely for all of them (*ḫuettiya-* and *wemiya-* are almost certainly remade root presents like *karpiya-* beside *karp-* 'lift').[21] It is likely, though not provable, that the function of the scriptio plena in several of these examples is to mark the accent: *e-eš-zi* 'is', *me-e-ek-ki* 'much', *me-e-na-aḫ-ḫa-an-da* 'facing, towards', *ne-e-pi-iš* 'heaven, sky', *te-e-kan* 'earth' (cf. note 11).

### 2.1.1.2. Examples of *e* < *\*ĕ* in Suffixes

Consistent *e* spellings are found in Old Hittite for the *e*-grade forms of the *\*-ye-/-yo-* suffix. I have counted examples from twenty-one stems: e.g. *a-ni-e-ez-zi* (*KUB* XXIX 30 II 21 ff) beside which *a-ni-IZ-zi* (*KBo* XX 10 I 5) should also be read *a-ni-ez-zi* (1.3.2), likewise *ḫa-ri-e-mi* (*KBo* XVII 1 III 9), *ḫu-la-a-li-e-mi* (*KBo* XVII 3 IV 23), etc. It happens that for some verbs such as *wemiya-* 'find' we thus far have only OH examples with ambiguous spellings: *ú-e-mi-IZ-zi, ú-e-mi-IT.* Once again, in the absence of contrary evidence, these should be read after MH *ú-e-mi-e-ez-zi* (and OH parallels) as *ú-e-mi-ez-zi* and *ú-e-mi-et* (against viewing these as contracted forms /wemitsi/ and /wemit/ see note 13). Likewise the OH third plural *kar-pí-an-zi* (*KBo* VI 2 III 6) and the MH spelling *kar-pí-i-e-ez-zi* (*KBo* VI 3 II 66) show that OH third singular *kar-pí-i-IZ-zi* represents /karp(i)yetsi/ not /karpītsi/. Compare OH *ti-e-ez-zi, ti-i-e-ez-zi* and *ti-IZ-zi,* all /t(i)yetsi/ 'steps' below. The *-i-* in these forms appears to be an effort to mark the *y* glide clearly. Again there is no positive evidence for a contraction.

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[20] This manuscript is designated by Neu, *StBoT* 25. 240, as Type I, i.e. as 'typisch alt'.

[21] Note that the unextended form is attested for *ḫuētt-:* 2nd sg. *ḫu-e-ez-ta.*

One also finds OH *e* from *\*ye* where the *\*y* has been lost in Hittite: e.g. *kap-pu-u-en-zi* (*KBo* VI 2 IV 20) and *a-ru-wa-en-zi* (*KBo* XVII 28,6). On the derivation of these verbs see Oettinger, *Stammbild.* 338 and 357 with note 208. Likewise, *šu-ú-IZ-zi* 'rejects' (*KBo* VI 2 IV 8) may be read as /suwetsi/ < *\*suh₁-ye-*.

One also finds OH *ye* where the *y* is part of the root: *i-e-et-ta* 'goes' (*KBo* XVII 43 I 10) and *i-e-en-ta* 'they go' (*KBo* XXII 1 Vs 14) < *\*h₁y-é-*, *ti-(i)-e-ez-zi* 'steps' < *\*(s)th₂y-é-*, *pe-eš-ši-e-* 'throw (away)' < *\*pe+sh₁y-é-*, *ta-a-i-IZ-zi* 'steals' < *\*(s)teh₂y-é-*.[22] The reading of the last as *ta-a-i-ez-zi* /tāyetsi/ is once again assured by MH *ta-i-e-ez-zi*.[23]

Hittite abstracts in *-eššar* show consistent *e* spellings in Old Hittite. Note that this includes *ḫa-an-ne-iš-ni* (*KBo* VI 2 II 13) beside *ḫa-an-ne-eš-na-aš* (ibid. II 14): see 1.3.4. On the single exception *tuḫ-ḫu-i-šar* (*KBo* XVII 15 Rs! 17) beside *tuḫ-ḫu-eš-šar* (*KBo* XXV 36 III 3) see 2.3 below. The Hittite abstract suffix *-eššar/-ešnaš* could be viewed as an extension of neuter *s*-stems with generalization of the oblique *e*-grade stem of the base: *palḫeššar* 'breadth' < *\*pl̥h₂-és-r̥*.[24] However, the standard PIE paradigm has accent on the root throughout, and this also appears to be reflected in the most certain Hittite example of this class: *nepiš-* 'haven' < *\*nébhes-* with *i* < *\*ĕ* in the second syllable (see further below in 2.2.6.2). In derivational terms, the nouns in *\*-es-r̥* could just as well be genuine new abstracts based on adjectives in *\*-és-* (type of Grk. *pseudés* 'false'): thus nt. abstract in *\*æ/os* → derived adjective *\*-és-* → new neuter abstract *\*-és-r̥/n-*.[25] The intermediate adjective stage is probably directly attested in Hitt. *ateš* 'hatchet' < *\*adh-és-*, which makes more sense as an original adjective *\*'that which cuts' than as an abstract *\*'cutting'.[26]

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[22] In the last three examples the *\*y* is strictly speaking an 'enlargement', but the immediate analysis is *-y-e-*, not *-ye-*.

[23] The spelling *ti-i-in-zi* in *KBo* XVII 36 II 6 is not a solid example of *i* for *e*, since one may assume instead a syncope of *ye/ya* to i: /tintsi/ for regular *ti-en-zi* /tyentsi/. Compare *ti-in-ti-eš* /tintēs/ in *IBoT* I 36 II 48 (MH ms.).

[24] The double *-šš-* in the nom.-acc. is analogical after the oblique stem where *\*-s-n-* > *-ššn-* is regular. For the gemination of PIE *\*s* before a sonant compare *kiš(ša)ra-* 'hand', *ḫatalkiš(ša)na-* 'acacia', etc.

[25] Vaillant, *Gram. comp. IV* (1974) 376–377, has given a similar analysis of Slavic nouns in *\*-os-ti-*: not an extension of *\*-e/os-* by the noun suffix *\*-ti* (which is normally primary), but rather abstracts in *\*-i-* to adjectives in *\*-os-to-* (type of Lat. *angustus* 'narrow'). Although Vaillant denies a connection with Hitt. *-ašti-*, in principle the same explanation is possible for the Hittite. The lack of the intermediate adjectives in *\*-osto-* in Hittite is not a counterargument, since, as Vaillant admits, they are also lacking in Slavic.

[26] I follow Čop, *Sprache* 3 (1956) 140, in assuming *\*adh-es-*. The reconstruction *\*o-dhh₁-es-* 'laying on' (of the blade) by Eichner apud Mayrhofer, *Kurzgef. Etym. Wb.* d.

Another case of suffixal *ě appears in the oblique stem *paḫḫuen-* 'fire' < *$ph_2$-wén-*. The oblique stem *witen-* 'water' represents *wedén-* remade from *wéd-n̥-* after *$ph_2$-wén-*: see Schindler, *BSL* 70 (1975) 7 and 10.

The *e*-grade forms of the iterative suffix *-skê/o-* are generally spelled simply with the ambiguous KI sign in Hittite, but there are enough OH examples with scriptio plena to confirm a reading *-ske-*: *zi-ke-e-et* (*KBo* XXII 2 Vs 3), *da-aš-ke-e-mi* (*KBo* XVII 3 IV 10), *da-aš-ke-e-u-e-ni* (*KBo* XXII 2 Vs 19), *[ar-ši-ik]-ke-e-et* (*KUB* XXIX 30 III 13), *ak-ku-uš-ke-e-ši* (*KUB* XXXI 143 II 16), *ak-ku-uš-ke-e-wa-ni* (*KUB* XXXVI 110 Rs 7). Here again we are facing an originally accented *ě*.

## 2.1.1.3. Other Examples of *e* < *ě*

The first and second plural active verb endings *-wen(i)*, *-men(i)* and *-ten(i)* reflect *ě*: cf. Grk. *-mes/-men* and *-te*. They are spelled quite consistently with *e* in Old Hittite. For *pé-e-tu-mi-en* (*KBo* IX 73 Vs 4) vs. usual *-me-en* see 1.3.3. The solitary spelling *pé-e-tu-mi-ni* (*KBo* XVII 1 I 27) vs. usual *-me-(e)-ni* must be regarded as aberrant. In many athematic paradigms the accent originally fell on the ending, and the occassional plene spellings probably reflect this: *tu-me-e-ni* (*KBo* XVII 1 IV 25 etc.), *pé-e-tu-me-e-ni* (*KBo* XVII 3 II 47), *da-at-te-e-ni* (*KUB* XXXVI 106 Vs 8), *i-iš-te-e-ni* (*KBo* XXII 1 Rs 27), *ša-ak-te-e-ni* (*KBo* XXII 1 Vs 5).[27]

The preverb *pē*[28] is also spelled consistently with *e* in Old Hittite: *pé-en-na-* 'drive', *pé-e-da-* and *pé-da-* 'carry', *pé-e-ḫu-te-* and *pé-ḫu-te-* 'bring' (see 1.3.2), and usually *pé-eš-ši-ya-* 'throw (away)' (*pí-iš-ši-ya-* in *KBo* XVII 36 III 8 is hapax).[29]

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*altind.* 3.804, is highly unlikely, especially since the preverb *o-* is really *$h_3$e-* (> Hitt. *ḫa-*; see note 34).

[27] The reconstruction by Oettinger, *Stammbild.* 566, note 12, of an Anatolian lengthened-grade *-w/mēn(i)* based on Hitt. *-me-e-ni* and HLuv. *-min* is unjustified. On his alleged lengthening rule see note 11. In view of the relationship of HLuv. pret. 1st sg. *-ha* to pret. 1st pl. *-han*, it is probable that HLuv. pres. 1st pl.(!) *-min* is modeled after the 1st sg. ending *-mi* (see on these forms Morpurgo-Davies, *KZ* 94 (1980) 93 ff).

[28] See Excursus V.

[29] In *piye-* 'send', which is a univerbation of *pe* + *ye-/ya-* 'make, do', we find consistently the OH spelling *PÍ-i-e-*. In principle, this spelling could represent regular /peye-/. However, since all other instances of *eye* in Hittite contract to *ē* with loss of intervocalic *y* (see 2.1.3), *piye-* is the only example of *eye* which we have, and a sound change to *iye* cannot be excluded: /piye-/. The preservation of intervocalic *y* in this verb is due to the fact that the combination remains transparent: *pe* + *ye-* 'hin-schicken' vs. *u* + *ye-* 'her-schicken'.

The *ĕ of the reduplicating syllable is also spelled e in Old Hittite: me-(e)-ma-al 'flour', me-(e)-ma- 'speak', le-e-la-ni-ya- 'hasten'. Compare also ú-e-wa-ak-ta in KUB XLIII 23 Rs 12, a manuscript designated by Oettinger, Stammbild. 579, as 'mh. oder spät ah.'.

## 2.1.2. OH e < PIE *eh₁

i-e- 'make' < *(h₁)yeh₁-, (and piye- 'send' < *pe+yeh₁-), ganešš- 'know' < *ǵneh₁-s-, marše- 'be false' < *mr̥s-eh₁-,[30] tē- 'say' < *dheh₁- (and pe-ḫute-, uwate- 'bring' and wete- 'build'), inchoatives in -ešš- < *-eh₁s-,[31] perhaps ēp- 'take, hold' < *eh₁p- and lē 'do not' < *leh₁ 'leave off, cease!' (but compare 2.1.3).

Orthographic notes: i-IZ-zi (KBo VI 2 passim) is to be read i-ez-zi after i-e-ez-zi (ibid. III 17) (see 1.3.2). One finds ga-ni-eš-zi (KBo VI 2 I 43.46) beside ga-ne-eš-zi (ibid. I 38) according to 1.3.3. For inchoatives in -ešš- note par-ku-e-eš-ta (KBo VIII 42 Rs 9).

## 2.1.3. OH e < PIE *ē

ēšḫar 'blood' < *ésh₂r̥, éš- 'sit' < *h₁és-, ēd-/ēz- 'eat' < *h₁éd-, mēḫur 'time' < *méh₂wr̥, wēḫ- 'turn' < *wéh₂-, wēk- 'ask for, demand' < *wék̂-, eni 'the aforementioned' < *ēni (Pedersen, Hitt. 62). It is also possible that lē, the prohibitive negative, is from *nē (but cf. 2.1.2).

It is likely that wēš 'we' is /wēs/, with a long ē by contraction from *wey-es (Pedersen, Hitt. 75), but /wes̩/ < *weis with a diphthong is also conceivable (Oettinger, Stammbild. 544). A sure case of a long ē by contraction is found in Hitt. wašše- 'clothe' from the causative *woséye- seen also in Skt. vāsáyati and Goth. wasjan. After the certain wašše- < *woséye- one may also read the ambiguous lu-uk-KI-IZ-zi 'kindles' (KBo VI 2 IV 53ff) as /lukētsi/ < *loukéyeti: cf. Lat. lūcēre 'kindle'.[32]

Orthographical notes: ú-IK-ta (KBo XXII 2 Rs 12) is to be read ú-ek-ta after ú-e-ek-zi (KBo XX 8 Vs 17 etc.). For wašše- note wa-aš-še-e[z-zi] in KBo XX 18+ Rs 3.

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[30] For the reconstruction of e-statives in Hittite < *eh₁, see Watkins, TPS (1971) 51ff. The specific stem marše- is demanded by OH mar-še-e-er in KBo VI 2 II 55. The stem mar-šiya- set up by Oettinger, Stammbild. 355, does not exist.

[31] The sequence *-h₁s- becomes geminate -šš- in Hittite: cf. g(a)nešš- 'know, recognize' < *ǵneh₁s-.

[32] For lukke- 'kindle' < *loukéye- see Watkins, TPS (1971) 68–69. It cannot be excluded that the type of waššezzi: waššanzi (with ē: ă) shortened the ē of the singular after the more numerous verbs in -škĕ-/-škă- and -yĕ-/-yă- (as well as kappuwĕ-: kappuwă-).

## 2.1.4. OH $e$ < PIE $*Vi$ / $*Vh_1i$

*eḫu* 'come!' < *$*ei-h_3au$, *ḫantezziya-* 'in front' < *$*h_2enteityo-$, *nea-* 'turn' < *$*néih_1o-$ (likewise *zea-* 'be done, cooked' < *$*séih_1o-$),[33] *we-* 'come' < *$*u+ei-$, pres. 3rd sg. ending *-e* < *$*-ei$, *te-(ḫḫe)* 'I place' < *$*dhéh_1i-(h_2ei)$*;

nom. pl. anim. pronominal ending *-e* < *$*-oi$ (in *apē*, *kē*, *t-e*, *n-e* and *mān-e*), dat. sg. *-šše* 'to him' < *$*soi$, oblique demonstrative stem *kēd-*, *apēd-* < *$*koi-$, *$*obhoi-$ (cf. Skt. oblique *te-* < *$*toi-$), nom.-acc. pl. nt. ending *-e* < *$*-oi(h_1)$ (in *kē*, *2-e*, *kue*);

*pē-* 'give' < *$*pai-$, pres. 1st sg. ending *-ḫḫe* < *$*-h_2ei$ [hai], *ḫe(n)k-* 'offer; bow' < *ḫa-i(n)k-* < *$*h_3e-h_1enk-$*;[34]

*utnē* 'land, country' < *$*utnéi$.[35]

See also *ḫatreške-* 'write' and *iškuneške-* 'mutilate, deface' with secondary *e* < *āi*.[36]

Orthographic notes: the spelling *ḫa-an-te-ez-zi-(y)a-* is normal: e.g. *KBo* XVII 43 IV 4. The spelling *ḫa-an-DI-zu-um-ni* (*KBo* XVII 3 I 16) may be read *ḫa-an-de-zu-um-ni* after *KBo* XVII 1 I 21 *ḫa-an-te-ez-zum-ni*. The unique spelling *ḫa-an-ti-iz-zi-an* (*KBo* XXV 123,8) is found in a manuscript which has the equally aberrant *ú-i-it* 'came' (line 4): see further 2.3 below. The stem *zē-* is spelled *zi-e-* (*KBo* XVII 1 III 21, XX 36 II 11) according to 1.3.3 (use of the sign *zé* in OH manuscripts is rare). Since we find both *ú-e-ez-zi* (*KBo* XVII 1 III 13) and *ú-IZ-zi* (ibid. I 40) as well as *ú-e-et* (*KBo* XXII 2 Rs 13) and *ú-IT* (ibid. Rs 8), we should read both forms consistently with *e*: /weṭsi/, /weṭ/. There is no justification for assuming a contrast *uet: uizzi* (with *i*-umlaut in the latter), as proposed by Eichner, *MSS* 31 (1973) 76. For the pres. 3rd sg.

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[33] The OH sequence *ẹ-a*, which is later replaced by *eya*, points to similar preforms for *ḫeu-* 'rain' (*$*h_2/_3eih_1u-$) and *ea-* 'evergreen tree' (*$*eih_1o-$).

[34] Eichner, *MSS* 31 (1973) 62 and 72, tentatively analyzes *ḫenkur* 'offering' as *$*h_2énkwr$ like *mēḫur* 'time' < *$*méh_2wr$. This is now falsified by the gen. sg. *ḫenkuwaš*; a gen. sg. *$*h_2énkwns$ would have led to *$*ḫenkunaš$ like *meḫunaš*. The verb *ḫenk-* 'offer' does not contain a long *ē*, but *e* from a diphthong. The PIE preform is *$*h_3e-h_1enk-$, with the preverb *$*h_3e-$ seen in Hitt. *ḫatk-* 'close' and *ḫašdwēr* 'twigs, branches' as well as Grk. *okéllō* 'drive to land' and *ózos* 'branch', plus the verb *$*h_1enk-$ (Skt. *aśnóti* 'attains', Lith. *nešù* 'carry', etc.). The same form in the middle produces *ḫenk-* 'bow' < *$*$'offer oneself'. Hitt. *ḫenkan-* 'death' is also likely a neuter *n*-stem from this verb: *$*$'portion' > *$*$'fate' > 'death'. The details cannot be pursued here, but note the uncontracted forms *ḫa-in-kán-ta* and *ḫa-IK-ta-ri* (OH mss.) representing /ha-ink-/ and /ha-ik-/.

[35] For this reconstruction see Schindler, *BSL* 70 (1975) 9.

[36] This irregular reduction of *āi* to *e* is undoubtedly due to the particular environment of the iterative stem, with its original accent on the *$*-ské/ó-$ suffix. Compare Oettinger, *Stammbild.* 360, for a similar analysis.

in -e, note *ma-az-zé* 'endures' (*KBo* VII 14 Vs 8) and *wa-ar-aš-še* (*KUB* XXIX 30 III 4).[37]

The dat. sg. -*šše* includes the spelling *nu-uš-še-iš-ša-an* (*ABot* 5 II 14) as per 1.3.4. The only example of the spelling -*šši* is *nu-uš-ši* in *KUB* XLIII 23 Rs 12, a manuscript which is either late OH or already MH. There are more than a dozen examples of the enclitic pronoun -*e* (nom. pl. anim. or nom.-acc. pl. nt.) spelled with *e*. The spelling *ma-a-ni-za* (*KBo* VI 2 III 7) vs. *ma-a-[n]e* (*KBo* VIII 74+ II 13) is isolated. The oblique stem /kẹd-/ includes the ambiguous *KI-IT-kar* 'at the head' (*KBo* XVII 1 II 42 etc.), which may be read /kẹdkar/ after *ke-e-et* /kẹd/ 'on this side' (ibid. III 26 etc.). The only OH example of /abẹd-/) is *a-PÍ-da-ni* (*KBo* VIII 42 Rs 10), which may be safely read *a-pé-da-ni* after the standard later spelling *a-pé-e-da-ni*.

For *ḫenk-* 'offer' see *ḫé-en-ku-wa-aš* (*KBo* XXII 1 Vs 13) and also *ḫé-en-ga-ni* 'destruction: (<'fate' < 'portion') in *KBo* XXII 2 Rs 5 (vs. the copy *ḫi-in-ga-ni*!). The verb *ḫe(n)k-* 'bow' < 'offer oneself' is spelled *ḫé-ek-ta* in *KBo* XX 10 I 5 ff. For the spelling *ḫi-in-ga* (*KBo* XX 11 II 5) see 2.3 below. The present first singular ending -*ḫḫe* is well attested: e.g. *KBo* XVII 3 I 16. II 4 etc.

### 2.1.5.  Other Examples of Consistent OH *e*

There are several other instances of consistent *e* in Old Hittite whose source is unknown or uncertain: <sup>GIŠ</sup>*ērḫui-* 'basket', <sup>É</sup>*ḫalentiu-* 'rest-house'(?), *ḫamešḫant-* 'spring', *ḫappēna-* 'flame', *neka-* 'sister', *pēri-* '?', *šeba-* 'sheaf', *šeppit-* 'kind of grain', *wēllu-* 'meadow', *weši-* 'pasture', *wete-* 'build' (first vowel), *zēri-* 'cup' (spelled *zi-e-ri* according to 1.3.3). Several grammatical morphemes are particularly problematic: pronominal gen. sg. -*ēl* (consistently -*el* or -*e-el* in Old Hittite),[38] anim. nom. pl. -*eš*, and preterite active third plural -*ēr*. The last two of these will be discussed in detail in 2.4 below.

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[37] Eichner, *MSS* 31 (1973) 76, claims that *-ei* in final position always appears as Hitt. -*i*, but this is falsified by *mazze* and *warašše*. The regular outcome of both *-ei* and *-ai/ -oi* is -*e* (3rd sg. -*e*, 1st sg. -*ḫḫe* and dat. sg. -*šše*). The appearance of -*ḫḫi* and -*i* beside -*ḫḫe* and -*e* does not represent a phonological alternation, but rather the analogical replacement of -*ḫḫe* and -*e* by -*ḫḫi* and -*i* after the other primary endings -*mi*, -*ši*, -*zi*, -*weni*, -*teni*, -*anzi*. This explanation is proposed by Eichner himself, ibid. 79, for the first person. The replacement of -*šše* by -*šši* is likewise analogical after other dative endings in -*i*, only at a later date (likewise Eichner, ibid. 78).

[38] In the OH manuscript *KBo* XXII 2 Vs 12, Otten, *StBoT* 17 (1973) 6, restores *an-zi-[el]* for /antsel/ 'our'. The traces before the break suggest rather *an-zi-l[a]*, with the non-geminating enclitic -*a* 'but'. However, in view of the usual spelling of /tse/ in Old Hittite with *zi-e(C)*, not *zé* (see 1.3.3), one can still read /antsel-a/.

## 2.2. Consistent *i* in Old Hittite

### 2.2.1. OH *i* < PIE *\*i*

#### 2.2.1.1. Examples of *i* < *\*i* in Root Syllables

*imma* 'even' < *\*immo, inu-* 'heat' < *\*i-neu-*,[39] *īt* 'go!' < *\*idhi* (and like-
wise 2nd pl. *ītten* 'go!'), *iškiš-* 'back' < *\*is-gh-°*,[40] *iškunā(i)-/išḫunā(i)-*
'mutilate, disgrace' < *\*isgḫun*,[41] *šiwatt-* 'day' < *\*diwot-*, *zinni-* 'finish'
< *\*si-néh₁-*. Note also *iwar* 'like, as' < *\*iwV* (= Skt. *iva*) in *KUB*
XLIII 23 Rs 21 (on this manuscript see 2.1.4 above). The borrowing
*ḫalmašuitt-* 'throne' < Hattic *ḫanwašuit-* also apparently reflects origi-
nal *i*.

An *i* 'enlargement' also appears in *ḫuinu-* 'cause to run' < *\*hwi-nu-*
< *\*h₂u(h₁)i-néu-* as well as in the iterative stems *išḫiške-* 'bind' and *me-*
*miške-* 'speak' after which is modeled *piške-* 'give'.[42]

Orthographic notes: note the plene spellings *i-it* (*KBo* XVII 1 III 5
etc.), *i-it-te-en* (*KBo* VI 2 III 19), *ši-i-wa-az* (*KBo* XVII 15 Vs 19), *ḫal-*
*ma-aš-šu-i-iz* (*KUB* XXIX 3 I 4). The iterative stems listed above are
all spelled consistently *-iš-ke-* in Old Hittite.

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[39] This verb is often listed as *enu-*, but the OH spelling is consistently *inu-*. Since we
expect zero-grade of the root in a *nu*-verb, and zero-grade of the root is attested else-
where (Skt. *inddhé* 'kindles' < *\*i-n-dh-tói*), it is preferable to read /inu-/ < *\*i-néu-* (like-
wise Oettinger, *StBoT* 22 (1976) 34, note 51).

[40] Hitt. *iškiš-* 'back' (originally a nt. *s*-stem) has been compared to Grk. *iskhíon* 'hip,
hip-joint', which suggests that the initial *i-* is a genuine PIE *\*i*. The morphology and fur-
ther connections of these words are obscure.

[41] Puhvel, *IF* 83 (1978) 138ff, has convincingly related Hitt. *iškunā(i)-/išḫunā(i)-* to
Grk. *aiskhúnō* 'disfigure, disgrace', though minor details of his comparison need revision.
OH *i-* can only reflect an original *\*isgḫu-* (admitted by Puhvel as an alternative) versus
Grk. *\*aisgḫu-*. The Hittite verb is a denominative in *-ā(i)-*, as shown by the iterative *išku-*
*neške-* (see 2.1.4), and cannot be compared to *šunna-* 'fill', which is a remade nasal-infix
present *\*su-né-hₓ-/su-n-hₓ* ⸴ The coexistence of *iškunā(i)-* and *iškunaḫḫ-* parallels that of
*armā(i)-/armaḫḫ-* 'be pregnant' and others. Since both *-ā(i)-* and *-aḫḫ-* are added to con-
sonant stems as well as *a*-stems in Hittite, one may assume either *\*iškuna-* or *\*iškun-* as
the base. The latter would be comparable to that of *\*aiskhun-yō > aiskhúnō*.

[42] I accept the common etymology of this verb from *\*pe + ai-* (Grk. *aínumai* 'take',
Toch. AB *e-/ai-* 'give'). It must be noted, however, that the attested weak stem *pi-* can
hardly be regular from this source. The singular stem *pe-* (in *pē-ḫḫe*) may represent regu-
larly *\*pai-* < *\*p-ai-*. If the verb did not ablaut, then the plural should be the same: *\*pe-* <
*\*p-ai-*. If the root had zero-grade, then *\*pe-i-* should still give *\*pe-* before a consonant,
while in the third plural *\*pe-i-anzi* with loss of intervocalic *\*y* and deletion of *e* before *a*
(cf. the singular) would lead to *\*pǎnzi*. Attested *piweni, pianzi* must be analogical after
the other *ḫi*-verbs in final *-i-*.

### 2.2.1.2. Examples of $i < *i$ in Suffixes

A suffix -it- is attested in *šeppit-* (a kind of grain) < *sep-it-*.[43]

OH manuscripts also show consistent *i* spellings in *i*-stem nouns and pronouns. I have counted examples from 36 *i*-stem nouns and adjectives, plus the *i*-stem forms of *ki-* 'this' and *kui-* 'who, which'. Compare also *ki-ššan* 'thus', surely built on the nt. nom.-acc. sg. *kī* 'this'.

It is noteworthy that the few apparent exceptions are all in proper names or in nouns which are certain or likely borrowings: ᵐ*Taḫpurēlē[s]* (*KBo* XVI 72 + 73 III 6),[44] ᵐ*Malaiureš* (*KUB* XXXVI 99 Vs 5), *pēreš* (a cult functionary) (*KBo* XVII 9 + II 16.17), ᴸᵁSANGA-*eš* 'priest' (*KBo* XX 69 + Vs 6, *KBo* VI 2 II 59), *teššumme-* (a kind of vessel) (*KBo* XVII 1 I 29, XVII 6 II 6.19). All three of the common nouns listed are part of Hittite cultic language. Hitt. *šankunne-* 'priest' is certainly a borrowing from Akkadian *šangu* 'priest' (perhaps via some intermediary). It is plausible that the others are also borrowings. The nouns *pēre-* and *teššumme-* also occur with regular *i*-stem spellings: for the former see *KBo* XVII 43 IV 5 and XVII 21 + Vs 15, for the latter *KBo* XVII 1 passim. The same is true for *šankunne-* 'priest' (but there are no examples from OH manuscripts).

Since the appearance of *e* for *i* is restricted to these few examples, all of which may be plausibly taken as foreign words, I suggest that we are not dealing with confusion of /e/ and /i/ in Old Hittite, but rather with the adaptation of foreign nouns with *e* vocalism to the regular Hittite inflectional pattern. The treatment is quite analogous to that of Greek nouns borrowed into Latin, where one finds a mixture of Greek and Latin endings: e.g. *mūsica* < Grk. *mousikḗ* attested as *mūsicē, mūsicēs, mūsicēn* beside *mūsica, mūsicae, mūsicam* or *mȳthos, mȳthī, mȳthon*.[45]

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[43] On the suffix *-it-* in this and ohter words for edibles in PIE see Watkins, *Proceedings of the American Philosophical Society* 122/1 (1978) 10–11.

[44] Neu, *StBoT* 25 (1980) 27, note 72, attempts to read this form as a plural, but the preceding vertical must be either 'one' or the masculine determinative. Since the name ᵐ*Malaiureš* with nom. sg. *-eš* is sure, it seems futile to try to emend the other example out of existence.

The form ᴸᵁ*ḫamīneš* (*KBo* XVI 71 + IV 19, XX 13 I 4) is more problematic. The lack of the determinative MEŠ does not exclude a plural, but it does suggest a singular, and to my knowledge the word occurs elsewhere in Hittite only as a singular. On the other hand, aside from this form, the word appears consistently as an *a*-stem (including absolute ᴸᵁ*ḫamina* in *KUB* X 78 I 15 etc.). This argues that ᴸᵁ*ḫamineš* is indeed a nominative plural. Unhappily, both occurrences are in broken context.

[45] Since *pēre/i-* designates a cult functionary, the explanation as a borrowing seems plausible. However, this word has a phonological shape which would be compatible with an inheritance. Therefore one should consider an alternative explanation. It is possible

## 2.2.1,3. Examples of *i* < *\*i* in Endings

Hitt. *kuwapi* 'where, when' < *\*kʷo-bhi* is attested in Old Hittite in its extended forms *kuwapikki* 'somewhere, anywhere' and *kuwapitta* 'everywhere'.

Hitt. *eni-ššan* 'thus' is formed like *ki-ššan* 'thus', with the base *eni* 'the aforementioned', which reflects *\*ēn-i*: cf. Lat. *ēn* and Grk. *én, ēní-de* 'behold!' (Pedersen, *Hitt.* 62).

The adverb *a-PÍ-ni-iš-ša-an* 'thus, as follows' is modeled after *eni-ššan* and can thus be safely read as *a-pé-ni-iš-ša-an*. It is important to note that all these adverbs are spelled *-iš-ša-an* in Old Hittite, never *-eš-ša-an*, pointing to the original *i* of the base forms *kī* and *eni*.

The deictic particle *-i* which marks the PIE primary verbal endings is also preserved in Hittite as *-i*: *-mi, -ši, -zi, -weni, -teni, -anzi*. Since *\*-i* is required in the third persons by the change *\*-ti* > *-zi*, there is no reason not to assume *-i* in the other persons. Oettinger's reconstruction of a first plural ending *\*-wenei, Stammbild.* 566, is quite unnecessary and unjustified. It is clear from occasional forms like 3rd sg. *[(e-e)]š-za* (*KBo* VI 2 IV 54) and 3rd pl. *ša-ku-wa-an-za* (*KUB* XIII 2 III 16) that the preservation of final *-i* is not phonologically regular (at least not in all cases). Compare the examples cited in note 18. This does not, however, preclude the preservation of final *-i* in its function as marker of the present tense.[46]

An original *\*i* also appears in the preterite third singulars *yanniš* 'marched' and *tališ* 'left alone'. This is the same element which appears in other forms of the paradigm: 2nd sg. imv. *iyanni*, pres. 3rd pl. *iyanni-anzi, dalianzi*, pret. 2nd pl. *iyanništen, dališten*. Since the presence of this

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that the nom. sg. *pēreš* represents an inflection in *\*-eis*: cf. Lat. *aedēs, caedēs,* etc. The oblique stem would have been like that of regular *i*-stems: gen. *\*-y-és.* The adaptation to the regular *i*-stem inflection *(pēriš)* would be expected (likewise in Latin *aedis, caedis,* etc.). A secondary derivative to the root of *pēran* 'in front' would be conceivable: *pere-* would mean 'the one placed in front' or the like. So long as the meaning of *pēre-* remains unknown and parallels are lacking, this derivation is speculation, but it would account for the attested inflection. For the proposed sense note *KBo* XVII 43 IV 5: *pēriš uizzi[ ]pēran* SÌR*^{RU}* 'The *p.* comes, [ ] they sing before'. For *\*ei* > *e / ē/* cf. *utnē* < *\*udnéi* (2.1.4).

[46] For those who may not care to attribute the preservation of final deictic *-i* to its functional significance, there is an alternative. So far as we know now, the preservation of final *-i* may be regular after *-m, -n* and *-š*: thus *-mi, -ši, -weni, -teni.* Therefore its appearance in *-zi, -anzi* (and also medial *-ri*) may be analogical after those endings. The preservation of final *-i* in the nt. nom.-acc. sg. of *i*-stem nouns may likewise be attributed to the pressure of the rest of the paradigm. Similarly, the adverb *ḫanza* 'in front' shows the regular result of final *\*-ti* (< *\*h₂énti*), while *ḫanti* 'in front' > 'apart' is modeled after locatives where the preservation of final *\*-i* is regular.

*i* element in these verbs is indisputable, Oettinger's derivation of *-iš*
and *-išten* from *-ěs* and *-ěsten, Stammbild.* 77, is unfounded. His de-
rivation of this *i* from short *ě* from an original diphthong *ai, ibid.
71, is also phonologically impossible. The *e* resulting from *i*-diph-
thongs does not fall together with inherited short *ě* (see further be-
low), nor does it become *i* in Old Hittite (even in unaccented position):
note the enclitic dative *-šše* < *-soi.* The *i* of *yanniš* and *tališ* is there-
fore from an original *i* (see further 2.4.1). The preterite third singular
ending *-iš* in verbs like *akkiš* 'died' is another matter: see 2.2.7.

The instrumental ending is spelled consistently *-Ci-it* in OH manu-
scripts (the *e* of *kēd[an]ta* in *KBo* XXV 35 II 10 is the *oi* of the pro-
nominal stem (see 2.1.4), not the vowel of the ending). The etymology
of the Hittite instrumental ending is not assured, but one may compare
with Hitt. *-it* the Sanskrit ending *-it* in *dakṣiṇít* 'with the right hand'
(*RV* 5, 36, 4) and *cikitvít* 'with attention, care' (*RV* 4, 52, 4): see further
my dissertation (note 1 above), p. 466 ff.[47]

Since *mazze* and *war(a)šše* show that final *-ei* regularly gives *-e,* the
consistent spelling of the dative-locative ending as *-i* in OH manu-
scripts (NO exceptions!) indicates that the latter reflects locative *-i,
not dative *-ei.*

Orthographic notes: note the standard plene spelling *ki-i* 'this' for
/kī/. The dat.-loc. singular includes several plene spellings showing un-
ambiguous /-i/: *kiššarī* (*KBo* XVII 1 I 28), *ḫaššī* (*KBo* VI 2 I 54 etc.),
*Éḫistī* (*KBo* XXV 17 Vs 4) and *išḫī* (*KUB* XXXVI 100 Rs 10). Con-
trast also correct LUGAL-*i* in *KUB* XXIX 3 I 3 with LUGAL-*e* in the
NH copy *KUB* XXIX 1 I 21.

### 2.2.1.4. Examples of *i* < *i* Prefixes

The existence of a class of *ḫi*-presents with *i*-reduplication has not
heretofore been recognized, due to a failure to pay attention to OH
spellings. For example, Oettinger, *Stammbild.* 514 etc., posits a verb
*tětḫa-* 'thunder' with *e* vocalism in the reduplication. This ignores the
fact that the OH spelling is *ti-it-ḫa-,* not *te-et-ḫa-,* while the reduplicat-
ing vowel of *mema-* 'speak' is always written *me-(e)-.* There are no
good examples of OH *i* from accented *ě* or *ē.* Since the root has
zero-grade in *titḫ(a)-* and other verbs of this class, the accent was
surely on the reduplicating syllable. The consistent OH *i* can thus only
represent *i.* The *i* vocalism also fits the sense of these verbs, which

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[47] I owe the reference to Skt. *dakṣiṇít* to J. Schindler.

were originally iterative-duratives to regular *ḫi*-presents. This relationship is clearest in *lilḫ(u)w(a)*- 'pour' < *\*lí-lh$_x$w-* beside *laḫ(u)w(a)*- 'pour' < *\*léh$_x$w-*.[48]

The same relationship holds for *išḫ(u)w(a)*- 'sprinkle, scatter' (i. e., pour out repeatedly) < *\*h$_2$í-sh$_2$w-* beside *šuḫḫ(a)*- 'pour out' < *\*séh$_2$w-*. Here the pattern has been obscured by the fact that the weak stem *\*sh$_2$u-* of the base verb underwent metathesis to *\*suh$_2$-*, which was then generalized as *šuḫḫ-*.[49] For the dissimilatory loss of the initial *\*h$_2$* in *išḫ(u)w(a)*- compare Hitt. *isḫy-* 'bind', which is likewise originally an iterative *\*h$_2$í-sh$_2$y-*, as shown by CLuv. *ḫisḫi(ya)-*.[50]

Hitt. *titty-* 'install'[51] is likewise from *\*tí-th$_2$y-*, originally the iterative to a *ḫi*-present *\*(s)téh$_2$y-ei*, *\*(s)th$_2$y-énti*. The latter irregular paradigm *\*tāye, tiyanzi* has been leveled after the third plural: *tiyezzi, tiyanzi* 'step, take one's place'. For this process compare *šiyezzi, šiyanzi* 'shoot,

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[48] The older (MH) examples of *lilḫ(u)w(a)*- have the *i* spelling: see *CHD* sub verbum. For the original inflection of *laḫ(u)w(a)*- 'pour' see Jasanoff, *Heth. und Idg.* (1979) 88.

[49] For the metathesis in this verb see Jasanoff, *MSS* 37 (1978) 89–90, with references. Formally, it is true that the original third plural of the base verb would have been *\*sh$_2$w-énti*, which would also lead to Hitt. *(i)šḫuwanzi*. This could then lead to a general stem *išḫuwa-* (with prothetic *i*, real or graphic): cf. the discussion of *tiya-* immediately below. However, the difference in sense between *išḫuwa-* 'sprinkle, scatter' (pour out in a number of places) vs. *šuḫḫ(a)*- 'pour out' argues for the derivation of *išḫuwa-* from a reduplicated iterative stem. Hitt. *isḫy-* 'bind' could also be built on a third plural *\*sh$_2$y-énti* > *(i)šḫ(i)yanzi*, but CLuv. *ḫisḫiya-* argues for a reduplicated stem here too.

For the distinction claimed here between *išḫuwa-* and *šuḫḫa-* see e. g. *KUB* XXVII 67 III 7–8 (restored after *KUB* IX 25 Vs 2–3): [(*nu-ššan ANA* ^DUG^LIŠ.GAL SA$_5$ *ḫ)]ulliš šuḫ-ḫai [(šer-a-ššan ḫalki)]n karaš išḫuwai* 'He pours pine cones into a red platter and on them he sprinkles barley and wheat'. Contrast ibid. III 13: *nu-ššan ḫalkin karaš* ^GI^*paddani šuḫḫai* 'He pours the barley and wheat into a basket'. Thus while *išḫuwa-* and *šuḫḫa-* normally apply to the same ritual objects, one refers to the sprinkling of grain or the like over something else, while the other refers to pouring the material into a container (or out on the ground after the ritual is finished).

[50] For the laryngeal dissimilation compare also *walḫzi* 'strikes' < *\*h$_2$wélh$_2$-ti*: see Oettinger, *Stammbild.* 264.

[51] Pace Oettinger, *Stammbild.* 347, this verb is a *ḫi*-present in final *-i-*, not a *mi*-verb, as shown by the 3rd sg. *tittai* (*KBo* XIX 162 Rs 12). Semantically, one could also derive *titty-* from *\*dhí-dhh$_1$y-*, i. e. a reduplicated iterative to *\*dheh$_1$i-* 'place'. However, contra Oettinger, *Stammbild.* 347, note 178, there are no convincing examples of 'Verschärfung' in such reduplicated verbs (nor is there good evidence for devoicing of a preceding stop by *\*h$_1$*). Since the meaning is as easily derived from *\*(s)teh$_2$i-*, I prefer the latter root as source. The non-assibilation of *\*ti* to *zi* in a reduplicating syllable is to be expected (cf. *titḫa-* 'thunder' below). Obviously, if one insists on *\*dhí-dhh$_1$y-*, the verb is still evidence for the formation claimed here: an iterative with *i*-reduplication to a *ḫi*-verb (in this case compare Grk. *títhēmi* 'I place').

hurl' beside *šāi, šiyanzi* 'seal; throw'.[52] The relationship of *titty-* 'install' to *tiye-* 'step, take one's place' is directly comparable to that of Grk. *hís-tēmi* 'I set up, cause to stand' vs. *éstēn* 'I stood' from the same root.

Two more likely examples of this class are *mimma-* 'refuse' (in Old Hittite consistently with *i* spelling)[53] from *\*mí-mn-*: for this derivation see already Sturtevant, *CGr*[1].133, who compares Grk. *mímnō* 'I stay, tarry: (for the sense cf. Germ. *stocken* 'stop, hesitate' *verstocken* 'become stubborn'). Likewise *pippa-* 'overturn; turn up (of a robe)' never shows *pé-e-ep-* and is surely *\*pí-ph₁/₃-* (for the root see Hoffmann apud Oettinger, *Stammbild.* 498, who compares Skt. *ud pipīte* 'rises'). I would also add *titḫa-* 'thunder' < *\*tí-tḫ₂-* (with preservation of *\*h₂* in a secondary obstruent cluster): for *\*(s)teh₂* 'thunder' beside usual *\*(s)ten-*, compare the doublets *\*bheh₂-/bhen-* 'speak', *\*dreh₂-/drem-* 'run', *\*gʷeh₂/gʷem-* 'go', *\*weh₂-/wen-* 'strike'.

In order to establish the existence of this class, I have necessarily gone outside Old Hittite. Of the forms cited, *išḫy-, titty-, mimma-, pippa-* and *titḫa-* are all attested in Old Hittite.[54]

## 2.2.2. OH *i* < PIE *\*ih₁*

The iterative stem *išš(a)-* 'make, do' reflects directly the zero-grade root plus *-s(a)-*: *\*ih₁-s(a)-*. As I will show in detail elsewhere, the derivation of Hitt. *ie-/ia-* 'make, do' < PIE *\*yeh₁-* (Watkins, *Idg. Gram.* III/1.71, et al.) is sure, pace Oettinger, *Stammbild.* 350. The iterative stem *ḫalzišša-* 'call' is formed in the same fashion. While the etymology of

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[52] In the 'thematization' of athematic *ḫi*-verbs by back-formation from the third plural, the *a*-vocalism of the latter was generalized (see note 54). In the 'thematization' of *ḫi*-presents in final *-i* by the same process, one finds instead an alternation *-ye-/-ya-*: *šiye-/šiya-, tiye-/tiya-*. This is certainly due to the model of the derived verbs in *\*-ye-/-yo-* (denominative and deverbative) which are plentiful in Hittite. When the same process takes place in Neo-Hittite (*ḫuyami* 'I run' instead of *ḫuēḫḫi*), one finds only *-ya-*, because *-ye-* has been replaced in the entire class (see 1.2).

[53] The arguments of Oettinger, *Stammbild.* 497, for a reading /memm-/ are false: *mi-im-* cannot stand for *me-em-*, any more than vice-versa (we are dealing with unambiguous *Ce* and *Ci* signs). If Old Hittite had had /memm-/, it would have been spelled *me-em-* (cf. again *me-e-ma-* 'speak'). Oettinger's rejection of a change of OH *i* > NH *e* is also premature. I repeat that there are no good cases of OH *i* from accented *\*ĕ* or *\*ē*.

[54] The verbs *mimma-* and *pippa-* were undoubtedly originally also athematic like the others: 3rd sg. *\*mí-mn-ei* > *\*mimme, \*pí-phₓ-ei* > *\*pippe*. However, since this would have produced unacceptable forms in other persons (1st sg. *\*pí-phₓ-h₂ei*, etc.), these verbs were 'thematized' after the third plurals *mi-mm-anzi* and *pi-pp-anzi* (which were resegmented as *mimma-nzi, pippa-nzi* after the numerous Hittite verbs in final *-a-*). One may assume a similar process in Grk. *mímnō*. Thus it is likely that Sturtevant's comparison is a word equation, not just a root equation.

ḫalz(i)y(a)- 'call' remains obscure (see the discussion by Oettinger, *Stammbild.* 464), it has clearly been adapted to the class of ḫi-presents in final -i-, the core of which is made up of 'roots' in $*-eh_1i-$: $*dheh_1i-$ 'place', $*speh_1i-$ 'be satisfied', $*h_2weh_1i-$ 'run', etc. These would have had zero-grades in $*-ih_1-$ (see note 49). The iterative ḫalzišša- thus directly or indirectly also reflects $*-ih_1s-$: for double šš < $*h_1s$ see note 31. It is likely on structural grounds that zīnu- 'cause to cross over' and pittinu- 'cause to flee' also reflect a zero-grade $*ih_1$[55], since they are based on ḫi-verbs in final -i-: zāi- 'cross over' and piddāi- 'flee'.

If one may assume the same irregular development of $*s$ to Hitt. z as in zinni- < $*si-neh_1-$ (see Oettinger, *Stammbild.* 152), then zāi, ziyanzi may be taken from a root $*seh_1(i)-$ 'go forward, advance' seen in extended form in Grk. īthús 'straight' (forward), īthúō 'press forward' and in Skt. sádhate 'goes toward, reaches a goal'. The causative zīnu- would then represent $*sih_1-néu-$ (with metathesis) < $*sh_1i-néu-$. In support of this derivation, one may note that the Hittite verbs do not mean 'traverse' (for which Hittite uses ištarna arḫa pāi-), but 'reach the other side of' with objects such as 'river' or 'boundary'.

Oettinger, *Stammbild.* 473, note 32, takes pít-te-nu- as the basic spelling for 'cause to run' and derives it by anaptyxis from the rare píd-da-nu- /petnu-/. For the formation of the latter from piddāi- 'flee' he correctly compares tit(ta)nu- 'install' from titty- 'idem'. However, the OH spelling of 'cause to run' is consistently pít-ti-nu-. While this does not exclude derivation by anaptyxis (see 2.2.7), it tends to suggest a regular nu-causative to a ḫi-verb in final -i-: /petinu-/ like ḫuinu- and zīnu-. Oettinger's derivation of the base verb pitte- from $*peth_x-ye-$ is also less than certain. One could also assume a preform $*pteh_1(i)-$, with the same shape as $*dheh_1i-$ etc. and anaptyxis in the first syllable. In this case the causative would regularly be /petinu-/ < $*ptih_1-néu-$ < $*pth_1i-néu-$. For the base $*pteh_1-$ with $*h_1$ compare Doric aptḗs 'not falling'.

## 2.2.3. OH i < PIE $*\bar{\imath}$

Pedersen, *Hitt.* 59–60, analyzes aši and uni 'the aforementioned' (always with animate antecedent) as frozen case forms of the pronominal stem $*e/o-$ plus a deictic particle $*-\bar{\imath}$, comparing Grk. houtos-í, touton-í. One may cite also the emphasizing particle í of Sanskrit and Avestan and probably OIr. int-í. For further less certain reflexes see Pokorny,

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[55] It is likely that the oblique stem of 'mouth' iš- (OH), with i and double šš, also reflects a sequence $*ih_{1/3}s$, but the ablaut possibilities for this archaic noun are too numerous to assert this with confidence.

*IEW* 285. The parallel with the Greek forms in both function and position (emphasizing after an inflected pronoun) makes derivation of the Hittite from the lengthened *-ī likely, but it is impossible to exclude entirely a use of the 'hic et nunc' particle *-ĭ.

### 2.2.4. OH *i* < Syncope of *ye/ya*

There are a few examples of OH *i* resulting from the syncope of *ye* or *ya*. The verb *šittar(i)ya-* 'send by sealed document' is denominative to the noun *š(i)yatar* 'sealing'. With the addition of the verbal suffix plus endings (and perhaps shift of the accent to the verbal suffix *ye/ya*), the *šya-* of the first syllable was syncopated to *ši-*. The same change is seen regularly in the iterative stems of verbs in *ye/ya*: *anniške-, [kukku]riške-, [ētr]iške-, zaḫḫiške-, piššiške-* (NB: never spelled *-eške-* in OH manuscripts). Note that this syncope does not take place in the disyllabic iterative stem *š(i)yēške-* to *š(i)ye-* 'shoot; hurl' (which is the base verb of *pešš(i)ye-* 'throw (away)').[56]

### 2.2.5. OH *i* < PIE *ei

The verb 'lies' is spelled consistently *KI-IT-ta* in OH manuscripts and in fact throughout Hittite. Since there is no orthographic constraint against *ke-e-et-ta* (cf. inst. *ke-e-et* 'on this side'), we can hardly read this verb with Sturtevant and Kronasser as /keta/. Nevertheless, the source is indisputable: we must start with *k̂éi-to (cf. Skt. *śéte* and Grk. *keî-tai*). Eichner, *MSS* 31 (1973) 78, proposes that *ei > i after a velar, perhaps due to palatalization of the latter. This change, which appears to be supported by other examples, may be accounted for as follows. The *e* of the diphthong *ei was raised due to the following yod, causing palatalization of the preceding velar (thus *kʸẹi vs. *ĝenu- 'knee' > *genu-* /genu-/ without palatalization). The diphthong *ẹi regularly becomes a close *e* /ẹ/ (like the other *i*-diphthongs; see further below). This close *ẹ* is then raised by the preceding palatalized velar to *i*: *kʸẹi > *kʸẹ > *kʸi (vs. nom. pl. *k̂oi > kē /kẹ/ without palatalization and raising to *i*).[57]

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[56] Syncope is also lacking in the disyllabic *m(i)yēške-* 'grow' attested in the late OH or early MH manuscript *KUB* XLIII 23 Rs 9. The stem *m(i)ye-* to the *ḫi*-verb *māi, m(i)yanzi* was created in the same way as *š(i)ye-* 'shoot; hurl' to *šāi, š(i)yanzi* (see note 52).

[57] Eichner accounts for the difference between *ki-* < *k̂ei- and *kē* < *k̂oi by assuming a close *ẹ* < *ei and an open *e* < *oi. Two facts argue against this analysis: first, both *e* < *ei and *e* < *oi fall together with *i* in late Neo-Hittite, suggesting a close *ẹ* for both (see 4.1.4). Second, in Old Hittite one finds *i* < *ei only after velars, pointing to a conditioned change *ẹ > i*.

The same change appears to have taken place in *kiš-* 'happen; become' (iterative reduplicated stem *kikkiš-* with double stop!), which may be derived from *\*keis-* 'stir, be in motion' seen in Skt. *ceṣṭati* 'stirs, moves, acts'. For the shift 'be set in motion' > 'happen' compare Germ. *(ge)schehen* 'happen' < *\*skek-* 'spring, start in motion'.[58] Since Hittite has middles of the type *tuqqāri* 'is visible' < *\*tuk-óri,* a zero-grade *\*kis-ó(ri)* is in principle possible, but the consistent OH spelling *ki-i-ša-* with plene spelling of the first syllable (but never the second) versus *tuqqāri* and *urāni* argues for *\*kéis-o(ri)* like *\*néih₁-o(ri)* > *nēa(ri).*

The adverb *kinun* 'now' (always spelled *KI-nu-un*) may also be analyzed as an adverb *\*k̂ei* 'here' plus *nun* 'now'. For *\*k̂ei* 'here' compare Grk. *(e)keî* 'there' and Pal. *ki-i* 'here' in *ki-i-at* 'les voici' (*-at* referring to a list of offerings). The case of *kinun,* however, is quite ambiguous, since *\*k̂i-* (Lat. *ci-trā* 'on this side') and *\*k̂e-* (Lat. *nun-c* 'now') are also easily conceivable (the latter assuming *\*k̂e-nún* > *kinun*).

For more possible examples of *i* < *\*ei* after a velar see below 4.2.5.

## 2.2.6. OH *i* < PIE *\*ĕ*

### 2.2.6.1. Examples of *i* < *\*ĕ* + nasal

It is well established that PIE *\*ĕ* becomes Hittite *a* before *n* plus a dental stop: cf. Hitt. *anda* with Lat. *endo,* athematic present third plural *-anzi* < *\*-enti.* The same change is likely in final position: the 'supine' in *-wan* represents an endingless locative *\*-wen* (see Jasaoff, *MSS* 31 (1972) 123 ff, and my dissertation, note 1 above, pp. 411–412 and 455 f).

However, in other positions PIE *\*ĕ* is raised to *i* before a nasal plus consonant. A Hittite *innara-* 'strong, forceful' is attested in *innaraḫḫ-* 'invigorate' and as an adverb *innarā* 'brusquely, rashly' < *\*'forcefully'.* The matching CLuv. *annari-* 'force(ful)' demands a preform with *\*en:* see Oettinger, *Stammbild.* 540. Hitt. *i* and Luv. *a* can only be reconciled by assuming original *\*ĕ.* Both *innara-* and *annari-* may be viewed as thematizations of a compound *\*en-h₂nor-* 'having strength inside' (cf.

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[58] Oettinger and Eichner derive *kiš-* < *\*geis-* 'turn' (Germ. *kehren* etc.), which is equally plausible semantically. Pending solid evidence for 'Verschärfung' in reduplicated stems, I take reduplicated *kikkiš-* with geminate *-kk-* as evidence for original voiceless *\*k.* Should such Verschärfung prove to be true, then *kiš-* < *\*geis-* would be an example of *\*ei* > *i* after a voiced velar as we would expect. Eichner's assumption of a devoicing of *g* to *k* before *i* is phonetically implausible and unfounded, since it is based solely on the false claim of Riemschneider, *Fest. Otten* (1973) 273 ff, that the sign *GI* always represents /ge/. Both *KI* and *GI* are used to represent voiced /gi/, as shown by *kinu-* 'break open' < *\*ĝhi-néu-,* spelled both *ki-(i)-nu-* and *gi-nu-* (but never *ge-e-nu-!*).

Grk. -*ēnōr*).[59] The same change is seen in *manninkuwa*- 'close, near': on the suffix *-*enkʷo*- in this word (and in PIE) see now Neu, *IF* 85 (1980) 81 ff.

The change *eN* to *iN* also appears in the verbs *link*- 'swear' (see Oettinger, *Stammbild.* 138 ff) and in *ḫamank*-/*ḫamink*- 'intertwine, knot together'.[60] Oettinger reads these as /leng-/ and /hameng-/, but the consistent OH spellings with *IN,* not *EN,* make this impossible. The same holds for the weak stem of nasal-infix verbs in -*ink*-: *ḫar-ni-in-kX*- 'destroy', *šar-ni-in-kX*- 'make restitution', *ḫu-u-ni-in-kX*- 'wound'. These represent *-*ne-n-K*- replacing original *-*n-K*- with *-*ne*- spread from the singular: *$h_3r$-né-g-ti,* *$h_3r$-né-n-g-enti* for *$h_3r$-n-g-énti.* The regular outcome would have been *ḫarnekzi, ḫarninkanzi.* With the regular loss of *n* in the strong stem of the type *linkzi, linkanzi,* giving *likzi, linkanzi,* the vocalism of the nasal-infix verbs was also leveled to *ḫarnikzi, ḫarninkanzi.* Once again, Oettinger's reading /harneg-/ etc. is impossible because of consistent OH spellings with *NI,* not *NE*: *ḫar-ni-ik-ta* (*KBo* XXII 2 Rs 15), *ḫu-u-ni-ik-zi* (*KBo* VI 2 I 13.16). In fact, nowhere in all of Hittite are these verbs ever spelled with the *NE* sign! We must read consistently /lig-/, /ling-/ and /harnig-/, /harning-/, with *i* vocalism which originates in the cases with nasal plus obstruent clusters.

## 2.2.6.2. Examples of *i* < Unaccented *ĕ*

Evidence for this change (perhaps the most controversial proposed here) comes from the following examples:

The Hittite neuter *s*-stem *nepiš*- 'sky, heaven' points to PIE *nébhes*- with generalized *e*-grade of the suffix and fixed accent on the root, as elsewhere: Grk. *néphos,* Skt. *nábhas*-. For the fixed root accent ·in Hittite note the frequent plene spelling *ne-e*-. According to the rule of Čop, *IF*

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[59] Beekes, *Develop. of the PIE Laryngeals in Greek* (1969) 75, first argues that compounds in -*ēnōr* require a noun 'vital strength', not 'man', then tries to argue away the originality of the *o*-grade in -*ēnōr* and derive it secondarily from -*anér.* This seems unnecessary and artificial. Greek -*ēnōr* points to original compounds with a second member *-*$h_2nor$- meaning 'strength, virility' or the like.

VanWindekens, *Essays...J. Alexander Kerns* (1982) 343, has compared *innara*- etc. to the rare Greek noun *énara* 'arms taken from a defeated enemy'. The very specialized meaning of the Greek word makes the comparison dubious, and he cannot account satisfactorily for the Hittite geminate -*nn*-.

For the loss of *$h_2$* in Hittite between two sonants compare *ḫul(a)na*- 'wool' < *$h_2wlh_2$-neh$_2$* via *$h_2ulh_2$-neh$_2$*. It is hard to determine whether *ḫul(a)na*- contains a real or merely graphic anaptyctic *a.*

[60] For the derivation of *ḫamink*-/*ḫamank*- see Excursus XI.

75 (1970) 85 ff, the geminate -pp- of CLuv. *tappaš-* 'heaven' also confirms root accent in Anatolian. The preform *\*nébhes-* in thus virtually certain, forcing the assumption of a change *\*ĕ > i*.[61]

If we contrast the treatment of the suffix *\*-es-* in *nepiš-* with that in *ateš-* 'axe, hatchet' and the abstracts in *-eššar / -eššnaš,* there is hardly any conditioning factor other than accent which can be held responsible for the difference: the *\*ĕš* of *nepiš* and that of *ateš* are both in absolute final position in a disyllabic word. As noted above in 2.1.1.2, *ateš-* and the nouns in *-eššar* may be reasonably derived from adjectives in *\*-és-* (type of Grk. *pseudés*), where the accent fell on the *\*ĕ*. Explanation of the *e* here from the lengthened-grade *\*ē* of the animate nom. sg. is unlikely, especially in *ateš-* which is neuter.

Thus Hitt. *ne-e-pí-iš* reflects *\*nébhes-,* while *a-te-eš* and *-(e)-eš-šar* reflect *\*-és-* (NB the frequent scriptio plena in the latter type, where it is not required to mark the vowel coloring). There are other examples in Hittite of neuter *s*-stem nouns in *-iš-* which probably reflect *\*ₑes-*: *ḫu(wa)lliš-* 'pine-cone', *tunnakkiš-* 'inner room' and *dandukiš-* 'mortality'. The last two of these are generally listed as abstracts in *-eššar,* but they are spelled consistently with *IŠ* in Old Hittite, and the only attested OH nom.-acc. of 'inner room' is *tunnakkiš* (*KBo* XXII 2 Vs 9). The emendation of Otten, *StBoT* 17 (1973) 28, to *tunnakkiš⟨šar⟩* is unjustified. I am not aware of any examples of the nom.-acc. of 'mortality'. The forms *tunnakkeššar* and *\*dandukeššar* are based merely on the oblique stems in *-išna-* (read heretofore as *-ešna-*). However, the addition of the nasal suffix in the oblique cases does not justify assumption of a nom.-acc. in *-ar*: note *atteššanaš* (*KUB* IX 31 I 27) to *ateš-* and *ḫuwallišnaš* (*KBo* XVII 25 Vs 10, OH ms.), *ḫuwalliššananza* (*KUB* VII 58 I 3) and *ḫuliešni* (*KBo* XXI 23 I 22) to *ḫu(wa)lliš-*.[62]

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[61] The spelling of the oblique stem is, of course, ambiguous, being always *ne-(e)-PÍ-šX-,* but the consistent nom.-acc. sg. *ne-(e)-pí-iš* points clearly to /nébis/.

[62] Hitt. *ḫ(u)walliš-* would be the regular reflex of a *\*h₂wélh₂-es.* The alternate stem *ḫulliš-* is not likely to continue a genuine zero-grade *\*h₂wḷh₂-,* since already in PIE neuter *s*-stems appear to have generalized accented *e*-grade of the root. Hitt. *ḫulliš-* beside *ḫ(u)walliš-* may easily show a syncope of *wa* to *u*: see the examples cited in 'Reflexes of PIE *\*w* and *\*y* in Hittite', Section 3.1.4. It is probable that *ḫuwalliš-* should be derived from the same *\*h₂welh₂-* as *ḫul(a)na-* 'wool', since both are 'that which is plucked'.

There is some evidence for PIE neuter nouns in *\*-is-*: Av. *hadiš-* '(seat of) residence', Lat. *cinis* / Grk. *kónis* 'dust, ash' (despite the attested gender). It thus cannot be exluded that some of the Hittite nouns in *-iš-* reflect old *\*-is-.* In particular, note *iškiš-* 'back' beside Grk. *iskí-on* 'hip-(joint)' (see note 40), where accent on the initial *i-* is unlikely, thus eliminating *\*isgh-es-.* However, it would be highly arbitrary to separate Hitt. *nepiš-* from the *\*-e/os-* stem found everywhere else, especially from its Anatolian cognate CLuv. *tappaš-,* whose second *a* can reflect only *\*ĕ* or *\*o,* not *\*i*.

The claim that the change *ĕs > is in the above words is due to the lack of accent is confirmed by other examples: Hitt. idālu- 'evil' matches CLuv. adduwali- 'idem'. Once again, Hitt. i = Luv. a points to *ĕ. These forms have been derived by Watkins, *Indo-European Studies IV* (Harvard University, 1981) 269–270, from a noun *$h_1$éd-wōl 'evil' (seen in CLuv. adduwal 'evil'), formally parallel to *séh₂wōl 'sun', and derived from the PIE root *$h_1$ed- 'bite' like *$h_1$édwō(n) 'pain, ill' (on the latter see Schindler, *KZ* 89 (1975) 53–65). The accent on the base noun would have been on the root, which is also required by the gemination of *d to dd in Luvian (see above on tappaš-). However, a shift of the accent in the secondarily derived adjective idālu- would not be surprising (whether the scriptio plena of the -ā-indicates the accent or the expected long vowel cannot be determined). It is difficult to account for the change of initial *ĕ to i by any other means. Accented initial short *ĕ remains in Hittite: cf. the forms of ēš- 'be' (with various following environments: ēšmi, ešun, ēšta, ešer), ērman 'sickness' (see note 15), and probably also eku- 'drink' < *eg^wh- (evidence for lengthened-grade in this verb is weak).

While the word is not inherited, the consistent contrast in Old Hittite between ᵁᴿᵁNe-(e)-ša (*KBo* XXII 2 Vs 7.15) and ᵁᴿᵁKa-ni-iš (ibid. Vs 1.12, XXI 68 I 7, etc.) also suggests unaccented ĕ > i: /Nésa/ but /Kánis/.

The Old Hittite forms of 'hand' are all spelled consistently ki-iš-(ša)-rV. It is important to note that all of them are oblique forms, with scriptio plena of the ending pointing to accent on the ending: ki-iš-ša-ri-i (*KBo* XVII 1 I 28 etc.), ki-iš-ra-a (*KBo* VIII 42 Rs 4), ki-iš-ša-r[a-az] (*KBo* XVII 1 II 24). The word is an animate r-stem: NB nom. sg. keššar-šiš in *KBo* VI 3 I 6 (the e-spelling here is not probative, however, since this MH copy is not consistent about e and i spellings).[63] The alternate spellings kiššar-, kišser-, kišr- point to an original -sr- cluster (see note 24). The Hittite oblique forms can thus be equated with those of Greek: *ĝhesr-í > Grk. kheirí and Hitt. /gissrí/.[64]

In similar fashion the OH verb kištanziya- 'suffer hunger' may be derived from an adjective kištant- 'hungry' < *Kest-ént- built on the weak stem *Kest- of the t-stem noun *Kóst-s, obl. *Kést- (attested in Hitt. kašt- 'hunger' and Toch. AB kaṣt/kest 'idem').

OH ḫuišwant- 'alive' may be analyzed as a possessive in -wént- to a root noun *$h_2$wes-/$h_2$us- 'life' (root of Grk. áesa 'I spent the night',

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[63] Note, e.g., the iterative piške- 'give' spelled pí-eš-kX- (*KBo* VI 3 I 17.22 etc.) versus consistent pí-iš-kX- in MH historical texts.

[64] On the original paradigm of 'hand' see Schindler, *IF* 72 (1967) 244 ff.

etc.). One would properly expect zero-grade in the derivative, and this is also attested: *ḫuš(u)want-* (*KBo* XVII 4 II 14, XVII 2 Rs 9). The form *ḫuišwant-* would represent *$h_2wes$-wént-* with secondary e-grade of the root after the verb *ḫueš-* 'live'. Alternatively, despite the difference in the meaning, one could view *ḫuišwant-* as an extension in *-ant-* of the adjective *ḫuešu-* 'raw': *$h_2wesw$-ént-. It is not certain that the appearance of *i* for *e* in this word (and likewise in *ḫuišwatar* 'life') is due to the lack of accent (cf. 2.3 below), but the consistent *i*-spelling in these derivatives throughout Hittite versus alternating *e/i* in *ḫue/iš-* 'live' and *ḫue/išu-* 'raw' suggests that we have in the former pair a fixed *i* from unaccented *ĕ*, not an *i* which alternates with *e*.

The same holds true for forms of 'water', which appear thus far in Old Hittite consistently with *i*-spellings: *ú-i-ta-a-ar*, *ú-i-te-na-aš*, *ú-i-ta-an-ta*. Grk. *skór* 'dung' suggests that 'amphikinetic' collectives in *é-ō* may have secondarily shifted the accent to *e-ṓ* (after the oblique stem with accent on the ending). Hitt. *widār* may thus reflect *wedṓr*.[65] Likewise, since obl. *weden-* is for *wédn̥-* after *$ph_2$wén-* (see 2.1.1.2), the accent was probably also on the suffix: *wĕdén-* hence *witenaš* and analogically inst. *witanta* /widánd/. However, the alternation *e/i* in this environment again makes this example less than certain: see 2.3.

Other cases of *i* for unaccented *ĕ* in Old Hittite are also open to question for various reasons. The manuscript *KBo* XVII 21 + distinguishes *ša-mi-nu-* 'cause to withdraw' in Vs 15.16 from *ša-me-en-* 'withdraw' in Vs 53. Since the *-nu-* suffix probably took the accent, we could suppose *smĕn-néu-* > /smi-nú-/ (for the possibility of a *nu*-verb with a full grade of the root compare the later *mernu-* 'cause to disappear' from *mer-* 'disappear'). For the loss of the first *n* in *šaminu-* compare the similar simplification in *kuemi* 'I slay' < *$g^w$hén-mi*. However, since we are dealing with the spelling of a single manuscript, the example of *šaminu-* < *smĕn-néu-* is hardly assured.

The indefinite marker *-kki* (*kuedanikki*, *kuwapikki*, etc.) has been equated to Lat. *-ce* in *ecce*, *hīs-ce*, etc. We therefore again would have unaccented *ĕ* > Hitt. *i*. However, this example is hardly probative, since one may well doubt that the Hittites would have written plene

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[65] This idea receives support from the fact that Hittite apparently shortens unaccented long vowels in (closed?) final syllables: cf. *te-e-kán* = /dégan/ < *dhéĝhōm* and gen. pl. *-an* < *-ōm*. The evidence presented below for reading the anim. nom. pl. as /-ēs/ would not contradict this, since secondary /-ēs/ < *-eyes* could have been created after the old long vowels in this position had been shortened. The pret. 3rd pl. ending /-er/ < *-ēre* (2.4.2) may also be taken as synchronically short, but the orthography is ambiguous: cf. note 82.

*-ke-e* in a final unaccented syllable even if it were phonologically /-ke/. In principle it is also difficult to exclude a preform *-k̂i.*

The contrast between ᵈ*Ḫantašepa-* (*KBo* XVII 1 passim) and *Dagan-zipa-* (*KUB* XLIII 23 Rs 13.17) may be due to a difference in accent: *Ḫanta-šépa-* vs. *Dagánzipa-*. The latter is built on the endingless locative *da-ga-a-an* = /dagán/ < *dhg̑hé/óm*: see Schindler, *Sprache* 13 (1967) 201. One could thus assume *dagán+sepa- > /dagántsipa-/. The form *taršanzipa-* 'floor' (*KUB* XLIII 30 II 6) does not offer independent evidence for this change, since it appears to be modeled after *Daganzipa-* (*tarša-* 'stage, platform' is an *a*-stem). In view of the frequent OH spelling of /tse/ as *zi-e* and the rarity of the sign ZÉ (see 1.3.3), one could also suppose that the scriptio plena was dispensed with in a long word and still read /dagantsepa-/. The case of *Ḫanta-šepa-* vs. *Daganzipa-* for unaccented *ĕ > i* is further weakened by the fact that there is no independent evidence for the position of the accent in *Ḫantašepa-*.

In sum, Hitt. *i* from unaccented *ĕ* seems assured in *nepiš-* and *id-ālu-*. It is likely in other neuter *s*-stems in *-iš-*, in *kištant-, ḫuišwant-* and forms of 'water'. Other examples are quite uncertain.

If the rule of unaccented *ĕ > i* is valid, then of course there should be no examples of Hittite *e < *ĕ* in this environment. Note again that all examples of Hittite *e < *ĕ* in 2.1 above occur in accented environments. In the case of the first and second plural endings *-wen(i)/-men(i)* and *-ten(i),* one must assume generalization of the accented variant. Given the vitality of the ablauting athematic inflection in Hittite (both *mi*-conjugation and *ḫi*-conjugation verbs in *-i* and *-u*), such an assumption does not seem unreasonable. On the enclitic possessives in *-e/it,* the nominative plural ending *-eš,* and nouns in *-(zz)il* see 2.4.

### 2.2.7. OH *i* by Anaptyxis

Oettinger, *Stammbild.* 41, explains preterite third singulars such as *akkiš* (*KBo* VI 2 IV 3) and *išiyaḫḫiš* (*KUB* XXXVI 104 Vs 11) by anaptyxis in the environment guttural plus *s*. This rule is supported by other examples, such as preterite third singular *takkišta* (*KBo* III 22 Vs 8, *KUB* XXXVI 106 Rs 4) for */taksta/* vs. preterite third plural *tak-še-er* (*KUB* XXXVI 108 Vs 3) regularly /taksēr/. The latter example without anaptyxis suggests that the conditioning for anaptyxis is guttural plus *s* plus consonant (or word boundary). Another example of this development is found in the OH iterative stem *sanḫiške-* 'search' (*KBo* XXII 1 Rs 25, XXII 2 Rs 25). For further support for a genuine anaptyctic vowel in these examples see the MH section 3.2.7 below, where it will

become clear that anaptyxis also occurs in a sequence labial + $s$ + consonant.

## 2.2.8. Prothetic *i* in Old Hittite

Hittite reflexes of PIE initial clusters of $*s$ plus obstruent are spelled consistently with initial *i-* in Old Hittite: *išgar-* 'fix, stick' < $*sker-$, *išpant-* 'night' < $*k^wsp\text{-}ent\text{-}$, *išpant-* 'libate' < $*spend-$, *ištapp-* 'cover, stop up' < $*step/b-$, *ištarnink-* 'sicken' < $*sterk-$, and the oblique stem *išḫan-* 'blood' < $*sh_2n\text{-}$.[66] In addition, *ištarna* 'among, between' and *iš-tanana-* 'sacrificial table' may well have prothetic *i*.

Views as to the linguistic reality of this prothetic vowel are divergent. Sturtevant confidently reads /sC-/ everywhere, based on the alternation *šipand-* 'libate', *išpanduzzi-* 'libation vessel' (*CGr*[1]. 47) and on the consistent lack of scriptio plena (ibid. 233, note 37). Kronasser, *EHS* (1963) 525, doubts the reality of the prothetic *i*. However, Oettinger, *Stammbild.* 416 f, insists on the reality of the *i-*, reading *šipand-* 'libate' as /sepand-/ vs. OH *išpant-* 'libate' /ispand-/. His explanation of *šip(p)and-* as a dialect borrowing is entirely without foundation. Given contemporaneous written variants *iš-pa-an-*° and *ši-(ip)-pa-an-*° (for the latter as also OH see e. g. *KBo* XVII 11 IV 4. 14), the only reasonable conclusion for this word is that it contains an initial cluster /sp-/, which the syllabic writing system could only express (as always) with an empty vowel. I hardly need cite the use of empty vowels to express consonant clusters in Hittite.[67]

No other word shows such an alternation between *išC-* and *šVC-*. We are thus left with two alternatives: (1) in this one word the initial se-

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[66] The original singular paradigm of 'blood' may be reconstructed as an 'acrostatic' type $*(h_1)ésh_2r̥$, $*(h_1)ésh_2n\text{-}s$: for the type see Eichner, *MSS* 31 (1973) 69. With the usual replacement of *-s* by *-as* in the gen. sg., these preforms give regularly Hitt. *ešḫar, eš(ša)naš* ($*h_2 > ∅$ in a cluster). For this neuter *r/n*-stem we might also expect a collective plural with 'amphikinetic' inflection: $*(h_1)ésh_2ōr$, $*(h_1)sh_2n\text{-}és$. The preform $*sh_2n\text{-}és$ (preconsonantal $*sh_2n̥\text{-}$) is the source for *išḫ(a)n-* with prothetic *i-*. See Schindler, *BSL* 70 (1975) 6.

[67] Oettinger argues that the appearance of the *i-* already in the Old Assyrian texts of the *kārum* period at Hattuša proves that the vowel must be genuine. I fail to see his reasoning here. The problem remains the same, whether the language is Hittite or Akkadian: how is the cuneiform syllabary to express initial clusters /sC-/? That the same solution with prothetic *i-* would be found in all texts from Boğazköy is hardly surprising.

The fact that the change of *išp-* to *šip(p)-* is (with a single exception) never found in the derivatives *išpanduwa-, išpanduzzi-* or *išpanduzziyaššar* also excludes a real sound change. I cannot believe that a sound change would affect the base word but none of its transparent derivatives (which are used in similar contexts).

quence *sC-* was preserved, while in all others a prothetic vowel was added (/isC-/); (2) the initial cluster *sC-* was preserved in all cases, but for reasons unknown to us the alternate spelling *sVC-* came to be used only in the word 'libate'.

The second view seems to me in principle preferable, but the choice is hardly compelling. I therefore adduce the following piece of supporting evidence. In Old Hittite we have attested the word *isḫaškant-* (*KBo* XVII 1 I 24. II 12) which Otten-Souček, *StBoT* 8 (1969) translate according to context as 'blood-shot' (of eyes) and 'blood-stained' (of 'iron tongues'). The first element is clearly a form of the word 'blood', but what of the rest? The suffix *-ant-* is segmentable, leaving us with *-sk(a)-*. An adjectival suffix *-sk(a)-* in Anatolian is unknown to me. Given that the meaning appears to be specifically 'streaked, stained with blood', I propose that we have here a compound 'blood-smeared' < *\*isḫan-škant-*, i.e. the oblique stem of 'blood' plus the participle of *iške-* 'smear, anoint'. Since there is no trace of the *i-* of *iške-* (one would expect *\*isḫani-škant-* or perhaps *\*isḫariškant-*), I argue that there is in fact none: the verb is /ske-/, and likewise all other examples of consistent initial *isC-* < *\*sC-* represent /sC-/.[68]

Oettinger, *Stammbild.* 327, derives *iške-* from *\*is-ške-*, to the root *\*eish₁-* of Skt. *iṣ-* 'refreshment', *iṣirá-* 'streaming, vigorous', Grk. *hierós* 'holy'. However, the Hittite verb does not mean 'anoint' in the sense of pouring a liquid over something or someone (for which is used *šipand-*), but rather 'anoint' in the sense of smearing or rubbing a liquid on them. In fact, Oettinger cites as an example of the verb's usage precisely *HT* 1 I 38 *n-an esḫanta iškiyaizzi* 'He smears it with blood'. We have here attested the syntagm which underlies the compound *isḫaškant-* 'blood-smeared'.

The reading /ske-/ does raise the question of the morphological structure of the verb. The most reasonable formal analysis is that given by Oettinger: we are dealing with an original *\*sk̂e/o* present. Compare *tuške-* 'rejoice' < *\*tus-sk̂e-* (Skt. *túṣyati* 'rejoices'). The reading /ske-/ would require that all trace of the root itself has disappeared. I suggest that this is indeed what happened: /ske-/ is the original iterative to *peš-* 'rub (in)'. For the development *\*ps-sk̂e-* to *ske-* compare *ištanza* /stants/ 'soul' < *\*pstḗn +s*. The semantic relationship of 'rub (in)' to 'smear, anoint' is obvious.

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[68] Some initial sequences *isC-* may, of course, represent real inherited /isC-/: see *iškunā(i)-* and *iškiš-* in 2.2.1.1.

I therefore consider the prothetic *i-* in Hittite words from PIE \**sC-* to be merely graphic and read them as /sC-/. For a possible additional bit of supporting evidence for this interpretation see the Neo-Hittite section below.

## 2.2.9. OH *i* < PIE \**ē*

We have seen above that the OH reflex of PIE \**ē* is consistently *e* (2.1.3). However, Hoffmann apud Eichner, *MSS* 31.72, has proposed that $^{\text{É}}$*hištā*/*heštā* reflects a vṛddhi derivative \**h₂ēstoyo-* to \**h₂éstōi* 'bone(s)' seen in Hittite *haštāi*. While the equation of the '*hešta*-house' with NH *haštiaš* É-*ir* 'bonehouse' ('mausoleum'?) is not absolutely assured, both the equation and derivation are attractive. However, the OH spelling is consistently *hi-iš-ta-a*, with *i* vocalism. The same is true of $^{\text{LÚ}}$*hippara-* (member of a disparaged class of some sort), which Eichner derives from \**h₂ēporo-*, originally \*'bought', to *happar* 'transaction'. Given that the passages in the Laws concerning the *hippara-* deal with business transactions, the connection of *hippara-* and *happar-* seems likely. One may wonder, however, if the meaning was not rather \*'pertaining to business' > 'peddler'. As a class, peddlers are held in low esteem in many cultures, and one can well imagine that business transactions with them would be discouraged or proscribed.

OH *hištā* and *hippara-* suggest that PIE \**ē* becomes Hitt. *i* after \**h₂*. An additional example may be found in *hīla-* 'courtyard', attested in OH *hilammar* 'entrance-hall'. From the use of *hīla-* to refer to the halo of the sun and moon, it seems clear that the basic meaning is that of 'enclosure'. There is a well-established PIE root \**h₂lek-*/\**h₂elk-* 'protect, enclose', attested in Skt. *rákṣati*, Grk. *alékso* and also Goth. *alhs* 'temple' and Lith. *al̃kas*/*el̃kas* 'sacred grove'. As noted by Pokorny, *IEW* 32, the latter meanings obviously derive from \*'enclosed place'. The same development is seen in OE *weorð-* 'courtyard', Skt. *vṛtí-* 'enclosure' and Toch. AB *wärt*/*wartto* 'forest', all from \**wer-* 'protect, enclose' seen in Skt. *vṛṇóti*. The base \**h₂lek-*/\**h₂elk-* presupposes a \**h₂el-*, which I suggest is the source of Grk. *álsos* 'sacred grove', *álma* 'idem' (previously unsatisfactorily assigned to \**al-* 'nourish'). Chantraine, *Dict. étym.* sub *álsos,* points out that the word is used to mean 'sacred precinct' even when there are no trees. The basic meaning is once again 'enclosure'. Because sacred precincts often were groves, there developed a secondary association with trees, as in the case of the Tocharian and Lithuanian parallels. The root \**h₂el-* 'enclose' may be taken as the base of both Hitt. *hāli-* 'fold, corral' < \**h₂e/oli-* 'enclosure' and

ḫīla- 'courtyard' < *h₂élo-, originally *'pertaining to the enclosure'.[69] The formal relationship of ḫīla- and ḫāli- may be comparable to that of Vedic kṣáita- 'chief' and kṣití- 'clan', etc.

Obviously, none of the above derivations is assured. It should be noted, however, that there are no OH counterexamples to the change PIE *ē > Hitt. i after *h₂, since attested sequences of ḫe reflect i-diphthongs: ḫenk- and ḫeu- (2.1.4). Further independent evidence for the above change is found in Middle and Neo-Hittite: see 3.2.9 and 4.2.9.

## 2.2.10. Other Examples of Consistent OH *i*

As in the case of *e*, there are many cases of consistent OH *i* whose source is unknown or open to several interpretations: GIŠalkišta- 'branch', -ila in apaš-ila 'he himself' etc., GIŠarimpa- 'cedar'(?), LÚḫamīna- 'chamberlain'(?), Éḫalentiu- 'rest-house'(?), DUGḫanišša- (a vessel), ḫurtiyalla- 'basin', ᵈInar-, išḫa- 'lord' (prothetic vowel??), išiaḫḫ- 'denounce', iwaru- 'gift', gapIna- 'thread' (written with PÍ, thus strictly speaking ambiguous), gIpeššar 'areal measure' (also ambiguous), kardimmiyatt- 'anger', kištuna- 'rack, shelf'(?), LÚkīda- '?', nawi 'not yet', pIttuliya- 'constraint, fear', šalwina- '?', šīna- 'figurine' (NB: always with *i* in OH manuscripts), šalIk- 'accost' (ambiguous), šaudišt- 'heifer', šawitra- 'horn', tapIš(e)na- '?' (ambiguous), tarlIpa- (a drink), (ambiguous), warit- 'be afraid', wīlna- 'clay', wituli- '?'.

## 2.3. Alternating *e* and *i* in Old Hittite

There are a few examples of genuine alternation of *e* and *i* already in OH manuscripts. One set involves sequences of *we* + dental obstruent. One finds ú-e-et-[(ta-an-da-an-ni)] (KBo III 22 Rs 64) beside ú-i-it-ti (KUB XXIX 32,2) to wett- 'year' as well as ú-e-ta-an (KUB XXXVI 110 Rs 16), ú-e-te- (KUB XXXVI 108 Vs 9) and ú-e-te-ez-zi (KUB XXIX 29 Vs 6) beside ú-i-ta-an-tu-uš (KUB XXXVI 108 Vs 6.8) all to wete- 'build'. In wētt-/wītt- 'year' we are dealing with PIE *ĕ. The first *e* of wete-/wite- 'build' is of uncertain origin. This alternation could also be the source of the attested instrumental ú-i-ta-an-ta (KBo XX 22 I 5) and nom.-acc. pl. ú-i-ta-a-ar (KBo VIII 74+ II 15) to wādar

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[69] VanWindekens, *Essays ... Kerns* (1982) 327 f, also makes a plausible case for relating ḫāli- to ḫalina- 'clay' and Grk. alínein 'smear' etc., comparing for the sense Grk. teîkhos 'wall' < *dheiĝh- 'shape' (clay, dough, etc.). This derivation would not affect the formal analysis of ḫīla- and ḫāli-.

'water'. However, we have already seen that the *i* here could also regularly reflect unaccented *ĕ* (see 2.2.6.2). Thus far Old, Middle and Neo-Hittite originals show consistently *i*, but *wet-* is frequent in copies. The OH manuscript *KBo* XXV 123,4 appears to show *i* < *\*ei* in the same context: *ú-i-it-(war-aš)* 'he came' versus usual OH *wẹt* (see 2.1.4). It is worth noting, however, that the same manuscript also has the aberrant spelling *ḫantizzia-* (line 8) for normal *ḫantezzia-* (whose *e* is also from *\*ei*). This manuscript thus may simply reflect a dialect where *ẹ* has been generally raised to *i*.

It is also striking that the only exception to the *e* spelling of abstracts in *-eššar* in Old Hittite is in the word *tuḫḫueššar* 'incense' (?), which is spelled with *e* in *KBo* XXV 36 III 3 and XXV 73 LC 6, but appears as *tuḫ-ḫu-i-šar* in *KBo* XVII 15 Vs 17. The spelling with single *š* is also abberant, but to assume a separate word *tuḫḫui*SAR seems forced. It is easier to suppose the same synchronic *e/i* alternation in the sequence *wes* as in *wet*. This also raises the question of whether the *i*-spellings of *ḫuišwant-* 'alive' and *ḫuišwatar* 'life' are to be ascribed to the same source. As in the case of *wit-* for 'water', the lack of any *e* variants may be due to chance. For an alternative explanation of *ḫuišwant-* and *ḫuišwatar* see 2.2.6.2.

The second set of *e/i* alternations involves the sequence *e* + nasal where the *e* represents a close *ẹ* < *\*Vi* (see 2.1.4 and further below). Beside expected *ḫenkuwaš* 'offering' < *\*ha-ink-* < *\*h₃e-h₁enḱ-* and *ḫengan-* 'death' < 'fate' < 'portion' from the same source, as well as *ḫekta* 'bows' (*KBo* XX 10 I 5.6.10) with deletion of the *n*, we also find already in Old Hittite *ḫinga* 'bows' (*KBo* XX 11 II 5). Similarly, the only OH attestation of the pronominal genitive plural ending *-enzan* < *\*-oi-n-sōm* is *ki-in-z[a]-a[n]* (*KBo* VI 2 III 46) with an *i*. Apparently the relatively high *ẹ* resulting from *\*Vi* may sporadically be raised to *i* before a following nasal. This change is comparable to, though clearly separate from, the earlier pre-Hittite raising of *\*ĕ* to *i* before certain combinations of nasal plus consonant (2.2.6.1).

It should be pointed out that alternative explanations exist for both of these examples. OH *ḫe(n)k-* would have been the only athematic *mi*-verb of this shape, beside several in *-ink-: link-, ḫamink-, nink-,* etc. The appearance of *ḫink-* for *ḫenk-* may therefore be analogical after the verbs in *-ink-*. This explanation is in fact favored by the appearance of only *ḫi(n)k-* in Middle and Neo-Hittite (see below), which would be surprising if we faced a phonological alternation *e/i*. As for *kinzan,* W. Cowgill has suggested to me that it may contain the oblique pronominal stem in *\*-ei-* instead of *\*-oi-*, thus *\*ḱei-n-s-ōm*. In this case, *i*

< *ei after velar would be expected as per 2.1.5 above. Thus variation e/i < *ViN may be illusory.

## 2.4. Problematic Cases

Armed with the generalizations achieved above, we now turn to several problematic cases of e and i in Old Hittite whose orthographic interpretation and/or prehistory is open to debate.

### 2.4.1. 'Thematic' Verbs in CVRRi-

Oettinger, Stammbild. 150 ff, has plausibly derived Hittite zinni- 'finish' from a nasal-infix present to a root in final *-$h_1$: *si-ne-$h_1$-ti, *si-n-$h_1$-enti.[70] These preforms should lead to Hittite *zinezzi, zinnanzi. With generalization of the double -nn- from the plural, we would expect *zinnezzi, zinnanzi. Oettinger assumes a long ē from *$eh_1$ in this context, but as he points out, even if this is true, the opposition ē: a may well have been leveled to ĕ: a after the inherited thematic verbs. Since we are dealing with an accented vowel, we expect Hittite e in either case (see 2.1.1 and 2.1.2 above), and Oettinger reads the verb as zinne-. Unfortunately, the verb is spelled in OH manuscripts with NI, not NE: zi-in-ni-zi (KBo XX 10 I 5, XX 37 Vs 4). Furthermore, Oettinger's own survey, Stammbild. 311–312, shows that the verb is spelled consistently with NI throughout Hittite, never with NE! We must read /tsinni-/, whatever the explanation for the i vocalism.

We face a similar problem with the pret. 3rd plural tu-wa-ar-ni-IR 'they broke' (KUB XXXVI 104 Vs 7), which must represent *dhwernēr < *dhwerneyer.[71] Since the IR sign is ambiguous, we may read either du-wa-ar-ni-ir /dwarnir/ or du-wa-ar-ni-er /dwarnyēr/ (cf. 1.3.1), but in either case we have an unexpected i element.

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[70] The close semantic and morphological match with Lat. sinō 'let go of' leads me to accept derivation of zinni- from a root *$seih_1$- which likewise appears in ze(a)- 'be done' > 'be cooked'. The conditioning for the development of PIE *s to Hitt. z remains obscure.

[71] Oettinger's derivation, Stammbild. 151, from a nasal infix present *dhwr̥-né-$h_1$-ti, *dhwr̥-n-$h_1$-énti is impossible because *dhwr̥n-° could lead only to Hitt. *durn-°: see Eichner, MSS 31. 73 ff, for *CwR̥C to CuRC in Hittite. Eichner's own derivation from *dhworno-° is also impossible, because *w > ∅ in Hittite between a dental stop and *o: cf. idālu- < *$h_1$edwōl- (Luv. adduwali-) and dān 'twice' < *dwoyom. The only solution is a denominative from a stem *dhwerno-: *dhwerne-yéti, *dhwerne-yónti > *duwarnézzi, duwarnanzi: cf. waššézzi, waššanzi < *woséyeti, *woséyonti. As in the case of real *-$neh_1$-verbs, we expect /dwarne-/, but find /dwarni-/.

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We must also assume *i* vocalism in the verb *ḫulli-/ḫulla-* 'fight' which is backformed from the third plural *ḫullanzi* after the model of *zinni-/zinna-*.[72] Note the shared phonological shape *CVRRV-*. The OH spellings *ḫu-ul-LI-IT* (*KBo* XXII 2 Rs 8, *KUB* XXXVI 99 Rs 4) and *ḫu-ul-LI-IZ-zi* (*KUB* XXIX 32, 4.5) are of course in themselves ambiguous, but the interpretation /hullit/ instead of possible /hullet/ or /hullyet/ is demanded by the occasional confusion of preterite third singulars in *-it* with those in *-iš* (where the *i* is certain, see 2.2.1.3). Beside proper *ḫi*-conjugation forms *yanniš* and *penniš* compare *iyannit* and *pennit,* and conversely beside proper *mi*-conjugation *ḫullit* also *ḫulliš.*[73]

A phonological explanation of the *i* vocalism of *zinni-, tuwarni-* and *ḫulli-* appears to be impossible. The specific sequence $*-neh_1-$ is attested in *ganešš-* 'know' $< *\hat{g}neh_1-s-$ with expected *e* vocalism. While the example of *lē* $< *n\bar{e}$ (prohibitive negative) is uncertain, we have no reason to expect anything but *e* from $*\bar{e}$. We have no independent evidence to suggest a shift in the accent of *zinni-,* etc-. and furthermore we shall see below that $*\bar{e}$ probably appears as *e* even when unaccented.

When we seek a secondary source for the *i* vocalism in *zinni-, tuwarni-* and *ḫulli-,* we notice immediately the contacts of this group with the class of *ḫi*-verbs in *-anna-/-anni-: yanna/i-* 'march' (and other duratives), *penna-* and *unna-* 'hin-/her-treiben'. Note again the shared sequence *CVRRV—*. Oettinger, *Stammbild.* 494–495, adopts Forrer's derivation of duratives in *-anna-/-anni-* as denominatives in $*-ye-/-yo-$ from abstracts in *-atar, -ann-:* thus *laḫḫiyanna/i-* 'campaign' would be derived from the oblique stem of *laḫḫiyatar* 'campaign'. This explanation is falsified by the *ḫi*-conjugation of the duratives in *-anna-/-anni-*.

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[72] The original paradigm of 'strike' in Hittite would have been *walḫzi, ḫullanzi* regularly from $*h_2wélh_2-ti, *h_2wlh_2-énti$ (cf. Oettinger, *Stammbild.* 264, for the phonological developments). This very irregular paradigm was leveled in favor of *walḫ-,* but the stem *ḫulla-* was retained in the secondary meaning 'fight', and a new 'thematic' paradigm created after *zinnizzi, zinnanzi.* The point of contact was apparently the shared shape *CVRRV-*.

[73] This analysis is possible for other of Oettinger's 'thematic' class in *CVRRV-: malli-/malla-* 'grind', *šarri-/šarra-* 'divide', *marri-/marra-* 'crush', *šulli-/šulla-* 'quarrel' may all have secondarily assumed the inflection of *zinni/zinna-*. However, the ambiguity of Hittite orthography and their sparse attestation in the older language makes this uncertain. One could also read all instances with apparent *i* vocalism as /ye/: /mallye-/, /sarrye-/, etc. All these roots show some unambiguous cases of *-ya-* stems.

All Hittite denominatives in *-ye-/-yo- appear in Old Hittite in the *mi*-conjugation, as expected.[74]

Jasanoff, *Indo-European Studies* IV, Harvard University (1981) has convincingly related the Hittite duratives in -anna-/-anni to the Sanskrit present type in -anya-: *iṣaṇyati* 'presses forward', etc. For Hittite Jasanoff supposes an ablauting paradigm with third singular *-néh₂y-ei, third plural *-nh₂y-énti. These would give regularly the attested -(a)nnai, -(a)nnyanzi.[75] However, he offers no support from elsewhere for an ablauting paradigm, and the Sanskrit type shows only fixed *-(e)nh₂ye-. By Jasanoff's own analysis we are dealing with a secondary formation ( *-ye-/-yo- derivatives of nasal-infix presents). We would thus expect a fixed stem, and I would suggest the same source for Hittite as for Sanskrit: *yé-nh₂y-ei, *yé-nh₂y-onti. These would lead regularly to *yanni, yannyanzi, but the attested third singular *yannāi* may easily represent the regular renewal of the athematic 3rd sing. *ḫi*-ending -i by -āi: cf. OH *waštāi* beside *wašti*, etc. This derivation would have the advantage of explaining the pret. 3rd sg. *yannis* directly from *yé-nh₂i-s, while an ablauting paradigm would surely have had *ye-néh₂i-s > *yanaḫḫiš.

A fixed stem *yé-nh₂i- would have led to a paradigm with preconsonantal *yanni-*, prevocalic *yanny-*: *yanniḫḫi, *yannitti, *yanni, *yanniweni, *yanniteni, yannyanzi, etc. If we compare the expected paradigm of *zinne-*, we find *zinnemi, *zinneši, *zinnezzi, zinnumeni,[76] *zinneteni, zinnanzi, etc. In three forms, the two classes would likely have coincided except for the different vocalism *i* : *e*: pret. 2nd sg. *yanniš, *zinneš;[77] 2nd pl. pres./pret. *yanniten(i), *zinneten(i); imv.

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[74] This applies not only to synchronic *ya*-stems, but also to classes where the *y* has been lost: *kappuwezzi, kappuwanzi* < *kapu-yé/ó-, waššezzi, waššanzi* < *woséye/o-, and denominatives in -*āizzi, -ānzi* < *-āyé/o-. Oettinger attributes the shift of the duratives to the *ḫi*-conjugation to the influence of *penna-/penni-* and *unna-/unni-,* but the attested inflection of these univerbations cannot be original and itself requires explanation: we expect stems *penne(y)-* and *unne(y)-* like the base verb *ne(y)-* 'lead, turn'. See note 78.

[75] As shown by *tāye-* 'steal' < *(s)teh₂ye-,* *y* is preserved in an original sequence *-Vh₂yV-,* so *-neh₂yei would give in the first instance *-nāyẹ. However, the regular replacement of third singular -*ẹ* by -*i* (see note 37) would surely yield -*nāi* < *-nāyi.

[76] The synchronically irregular sequence -*num*- in the first plural shows the regular dissimilation of *-uwV-* to -*umV-* in Hittite. The sequence *-uwV-* here reflects a Sievers variant *[si-nh₁-uwén] for */si-nh₁-wén/.

[77] Oettinger, *Stammbild.* 39, assumes -*ta* as the original pret. 2nd sing. ending of the *ḫi*-conjugation, but there are no OH examples, and later second singulars like *daišta* beside third singulars *daiš* suggest an original undifferentiated 2nd/3rd sing. -*š*: cf. Watkins, *Idg. Gram.* III/1.55.

2nd sg. *yanni,* \**zinne.* These few forms seem a rather slim basis for in-
fluence by one class on the other, particularly since one has *ḫi*-conjuga-
tion, the other *mi*-conjugation. Note, however, that there are no more
points of contact in the OH paradigms of these classes (in fact, prob-
ably fewer, since the 2nd plural of the *zinne*- type was now *-atten(i);* cf.
*ḫullateni).* Nevertheless, considerable mutual influence of these classes
on each other within the historical period is undeniable. In addition to
the pret. 3rd singulars noted above, we find also *zinnaḫḫi, zinnai, zin-
naḫḫun, zinnāu,* and infinitive *zinniwan[zi];* likewise *ḫullai* and *duwar-
naḫḫi, duwarnatti, duwarnai, duwarnyanzi, duwarnau.* Conversely, there
is also attested *iyannizi* beside regular *iyannai.* In lieu of any better ex-
planation I therefore attribute the *i* vocalism of *zinni-, tuwarni-* and
*ḫulli-* to the influence of the duratives in *-anni-,* where the *i* is origi-
nal.[78]

## 2.4.2. Preterite Third Plural Ending

Analysis of the Hittite preterite third plural active ending is compli-
cated first of all by the ambiguity of the sign *IR* and the composite
signs *-kIr, -nIr* and *-šIr.* Before turning to the etymology of the ending,
we must first determine whether the Old Hittite reading is /-er/, /-ir/
or both. First of all, several examples which suggest *e* vocalism must be
eliminated as evidence, since they reflect the contraction of a stem
vowel with that of the ending: *mar-še-e-er (KBo VI 2 II 55) < \*mr̥séh₁-
e/ir, i-e-er (KUB XXXVI 108 Vs 2) < \*yéh₁-e/ir,* and *ú-wa-te-er (KBo
VIII 42 Vs 3) < \*°-dheh₁-e/ir* (see 2.1.2);[79] *ú-e-er (KBo VI 2 III 16 etc.)
< \*u+ei-e/ir* (2.1.4); and finally *da-aš-ke-e-er (KBo VI 2 I 14.58) <
\*-sk̂e-e/ir,* beside which ambiguous examples with *-kIr* or *-KI-IR* can
and should be read as /-ker/: *KBo VI 2 I 10. IV 16, XXII 2 Vs 5. Rs 6,*
etc. Since all the above verbs are *mi*-verbs, we must assume *e*-grade of
the root, as confirmed for Old Hittite by *e-še-er* 'they were' *(KBo
XXV 61 Rs 3.19).*

The last example from an athematic *mi*-verb does provide a solid ex-
ample for an ending /-er/ with *e* vocalism: /es-er/. This is confirmed by

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[78] The attested strong stem in *-anna-* of the duratives (and of *penna-* and *unna-*) is
secondary, being formed on the 3rd sing. in *-(a)nnāi* after the model of verbs in *-nna-* <
\**-neh₂-/-nh₂-:* thus *šunnāi: šunnatti: šunnaḫḫi : : iyannāi:* x (→ *iyannatti):* y (→ *iyan-
naḫḫi).* The univerbations *penna-* and *unna-* were remade in the same fashion due to
their shared phonetic shape *(C)VRRV-.* Naturally, the monosyllabic stem of the base
verb *ne(y)-* was not affected, since it did not have the proper phonetic form.
[79] If *kururēr (KUB XXXVI 100 Rs 4)* reflects a stative in \**-eh₁-,* then it belongs here
as well, but a *-ye-/-ya-* stem is equally possible: read *kururi-ēr,* i.e. /kururyer/.

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*ták-še-er* (*KUB* XXXVI 108 Vs 3) also from an athematic *mi*-verb, and by *ḫé-še-er* 'they opened' (*KUB* XXIX 3 I 5) and *iš-še-er* (*KBo* VI 2 III 15), both athematic *ḫi*-verbs.[80] Beside these unambiguous examples we may read *ta-me-eš-šír* (*KBo* XXII 2 Rs 12) as *ta-me-eš-šer*, *a-RI-IR* 'they arrived' (*KBo* XXII 2 Vs 8) as *a-re-er*, and *me-RI-IR* 'they perished' (*KBo* XXII 2 Vs 13) as *me-re-er*.

Among Old Hittite attestations, this leaves us with *me-mi-IR* (*KBo* XXII 2 Vs 14), *pé-eš-ši-IR* (*KBo* VI 2 II 57), *tu-wa-ar-ni-IR* (*KUB* XXXVI 104 Vs 7) and *PÍ-i-IR* (*KBo* VIII 42 Rs 10), the last either 'they gave' or 'they sent'.[81] These are the only OH examples which suggest an ending /-ir/. However, if *PÍ-i-IR* means 'they sent', then we are facing \**pe-yeh₁-e/ir*, and we must surely read *pí-i-er* or *pé-i-er* (cf. note 29 for the first vowel). In the remaining cases, a comparison with the present third plurals *(memyanzi, peššyanzi, tuwarnyanzi, pyanzi)* suggests rather an analysis *me-mi-er, pé-eš-ši-er, tu-wa-ar-ni-er, pí-i-er* (i. e., /memyer/ etc.). For all except *tuwarnier* see the same analysis by Oettinger, *Stammbild.* 68, 77 and 343. The secondary stem /dwarni-, dwarny-/ in 'break' has been discussed in 2.4.1 above.

We thus have solid evidence for an Old Hittite preterite third plural ending /-er/ *(ešer, takšer, ḫešer)*, but no sure examples for /-ir/. Two sources for the Hittite ending have been suggested: \**-ēr(e)* and \**-ĕr(e):* cf. Lat. perfect *-ēre* and *-ĕrunt*.[82] The Old Hittite evidence argues for the former. In both athematic *mi*- and *ḫi*-verbs the accent was surely on the root: *éšer, tákšer, ḫéšer*. In reduplicated verbs it was likely on the reduplicating vowel *(mémi-)*, and in univerbations of preverb and verb on the preverb *(péššye-)*. Only in *ḫi*-verbs in final *-i* and *-u* would the accent have fallen on the ending: *pyér* 'they gave' with zero-grade of the root. We have seen that unaccented short \**ĕ* becomes *i* in Hittite (2.2.6.2). If the preterite third plural ending had been

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[80] For the original athematic inflection of *iš(ša)-* see *iš-šu-ú-e-ni* (*KUB* XXIII 115 III 5, XXXI 147 II 4), *i-iš-te-e-ni* (*KBo* XXII 1 Rs 27). The 'thematic' stem *išša-*, like other 'thematic' *ḫi*-verbs, is backformed from the present third plural *iššanzi*. See note 54.

[81] *KUB* XXXVI 105, 4–5 shows incomplete *[ ]ú-e-er* and *[ ]-ú-IR*, the second of which is ambiguous.

[82] Oettinger, *Stammbild.* 114, reconstructs \**-eh₁re*, which is practically equivalent to \**-ēre*. His claim that unaccented \**ē > ĕ* is in principle unverifiable, since we have seen (1.3.1) that *ĕ* and *ē* are spelled the same. His 'statistical' evidence for partial differentiation in their spelling, ibid. 533, note 1, is worthless, since it is based on a completely undiscriminated corpus of originals and copies of various periods. There is thus NO evidence FOR Oettinger's shortening rule. All we can assert with confidence is that unaccented \**ē* appears as *e*, while unaccented \**ĕ > i*. For an independent reason for assuming shortening of \**ē* to *e* in the particular case of /-er/ see note 65.

*-ĕre, we would expect regular /-ir/ in most cases. It seems to me un-likely that /-er/ < *-ĕre would have been generalized from the few cases where the ending bore the accent. On the other hand, there is no counterevidence to assuming that *ē remained e in unaccented posi-tion. For independent evidence for long *ē in this ending see 3.2.9.

### 2.4.3. Nouns in -il or -zzil

Hittite nouns of this class have previously been listed as ending in -el or -zzel. However, the only attested OH spellings are in -il: KUB XXIX 36 IV 12 [(ḫu-ur-ki-i)]l 'abomination', KBo VI 2 I 47. II 28 šar-ni-ik-zi-il 'restitution', KBo VI 2 II 55 ta-ya-az-zi-il 'theft'. Contrast the pronominal genitive ending spelled -(e)-el. Furthermore, the pre-ferred spelling for the noun ending is -il, whatever the age of the manu-script: alil- 'flower', paššuwil- 'mountain stream'(?), esḫarwil- 'blood-X', šuwil 'thread'. Therefore the only possible reading is /-il/, /-tsil/.

The Hittite verbal abstracts in -zzil were derived by Benveniste, Ori-gines (1935) 42, from *-tēl, comparing Lat. tū-tēl-a 'guardianship' (like-wise already Sturtevant, CGr¹ (1933) 156). Several scholars, however, have questioned the authenticity of a unitary PIE suffix *-tēl: see Eich-ner, MSS 31 (1973) 85, Georgiev, KZ 92 (1978) 93–94, and Schmidt, Stammbild. und Flexion d. idg. Personalpronomina (1978) 121. Since the abstract suffix *-ti- is also represented in Hittite -uzzi < *-u-ti- (e.g. išpanduzzi- 'libation (vessel)'), the suggestion of Eichner and Georgiev that -zzil represents a conglomerate *-ti-el or *-ti-il is attractive.

This in turn raises the question of the origin of the -il of ḫurkil, šu-wil, etc. Here there are two proposals: Eichner, loc. cit., suggests *suh₁-ĕl, seeing a parallel in *h₂uh₁-ĕl, 'blowing' attested indirectly in the vṛddhi formation *h₂éwh₁el-eh₂ > Grk. áella 'whirlwind', Welsh awel 'wind, breath'. Schindler, BSL 70 (1975) 9, proposes a 'hysterokinetic' inflection, thus *suh₁-ĕl: cf. ḫašdwēr 'twigs' < *-wĕr (Benveniste and Sturtevant had already compared Lat. quer-ēl-a 'dispute', but cf. Geor-giev). The choice between these alternatives is determined by the Lu-vian forms ḫurkil 'abomination' and puwatil 'the past'. It is clear that CLuv. -til = Hitt. -zzil and -il = -il. Since *ĕ appears in Luvian as i after velars (cf. iš(ša)ri- 'hand' < *ĝhesr(i)-), one could account for ḫur-kil from *-ĕl as well as from *-ēl (cf. nī < nē). However, the -til of puwatil could only represent *-tēl < *-ti-ēl, not *-tĕl < *-ti-ĕl.[83]

However, the consistent OH spellings in -il and -zzil also cause dif-ficulties for derivation from *-ĕl and *-ti-ĕl. Accented *ē always ap-

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[83] That the product of *-ti-ĕl would be *-til with loss of the ĕ is hardly credible.

pears as *e* (2.1.3). We have no motivation to suppose that the accent shifted in the nouns in *-él*, and the consistent *e* of the preterite third plural ending *-er* argues that *$*\bar{e}$* appears as *e* even when unaccented (2.4.2).

The contrast between Hitt. *-zzil* and Luv. *-til* poses another problem for the derivation of this suffix as a conglomerate of *-ti-* and *-ēl*. Starting from *-ti-ēl*, we would expect one of two developments: deletion of the *i* before the long *ē*, or change of the *i* to a glide *y*: thus *-t-ēl* or *-ty-ēl*. Since *y* also assibilates a preceding *t* in Luvian (cf. demons. *za-* < *tyo-*), we must assume the first development for Luvian: *-ti-ēl* > *-t-ēl* > *-tǐl*. On the other hand, the assibilation of *t* before *ē* in Hittite is extremely dubious,[84] so we would need the other treatment for Hittite: *-ti-ēl* > *-ty-ēl* > *-zzil*. While such a divergence is not impossible, the need for such an assumption adds to the doubts about the derivation from *-ti-ēl*. Hitt. *-zzil* vs. Luv. *-til* points to a Common Anatolian *-tǐl* < *-ti-il*, with a suffix *-il* as already suggested by the Old Hittite spellings.

I know of no evidence for a PIE suffix *-il*, so we must look for an explanation within the history of Anatolian. In addition to nouns in *-il*, Hittite also has neuter abstracts in *-ul*: *takš-ul* 'peace', *wašt-ul* 'sin', etc. Despite the lack of evidence for heteroclite inflection, these probably reflect stems in *-wl̥* parallel to verbal nouns in *-wr̥/-wen-* (*henkur* 'offering'): see Eichner, *MSS* 31.76. The coexistence of *panku-* 'total, entire', *pangur* 'milk; clan' and *pangar-* 'mass', all from *bhenĝh-* 'be thick, draw together', suggests that the suffix *-wr̥* is a composite of *-w-r̥*. Likewise, then, *-wl̥* may reflect *-w-l̥*. Eichner, *MSS* 31.73 f, has already suggested that *hurki-* 'wheel' and *hurkil-* 'perversion' are derived from the same root *$h_2$werg-* 'turn, twist'. Despite the difference in their attested meaning, it seems possible that *hurkil-* 'perversion' < *'twisting, turning' is originally the abstract noun to an adjective *'that which turns' (> *hurki-* 'wheel'). The suffix *-il* would thus itself be an Anatolian composite of *-i-l*. In any case, the facts seems to demand an Anatolian *-il*, not *-ĕl* or *-ēl*.

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[84] I know of no counterexamples, but we know that *tĕ* remained in Hittite: 2nd pl. *-ten(i)* < *-te* = Grk. *-te*. Since there is no evidence that *ē* was a higher or 'closer' vowel in Hittite than *ĕ*, it is thus doubtful that *ē* assibilated *t* either. The example of *zik* 'you' < *tē-(ge)* is false, as shown already by the vocalism: Hitt. *i* cannot represent accented *ē*. The implausibility of deriving the subject from an accusative *tē* speaks for itself. I will shortly discuss the prehistory of *zik* and Pal. *tî* elsewhere.

## 2.4.4. Animate Nominative Plural Ending -eš

The animate nominative plural ending is spelled in OH manuscripts consistently as -(e)-eš, never -iš.[85] Two plausible sources exist for this ending, as noted by Pedersen, *Hitt.* 28, and Sturtevant, *CGr*[1].175: *-ĕs from the consonant stems or *-ēs < *-eyes from the i-stems (for the loss of *y and contraction compare *waššezzi* < *woséyeti* in 2.1.3). The nom. pl. ending *-ĕs of the consonant stems would have always been unaccented. By 2.2.6.2 above, we would thus expect Hitt. *-iš. Although it is true that the ending eventually spreads to the a-stems, even there one finds extremely few oxytone nouns: I can cite as likely candidates only *arà-* 'companion' and perhaps *isḫā-* 'lord'. If the rule of PIE unaccented short *ĕ > Hitt. i is valid, it is virtually impossible to derive the attested ending -eš from *-ĕs.

On the other hand, the preterite third plural ending -er < *-ēre indicates that unaccented long *ē remains e. We may expect the same result from a long ē by contraction: phonologically -ēš < *-eyes is unobjectionable. However, the assumed generalization from the i-stems to all noun classes requires some discussion.

The regular development *-eyes > -ēš in the nom. pl. would have led to an irregular allomorph in the i-stem nouns: e.g., *māri-š, māry-aš*, but nom. pl. **mār-ēš* 'lance'(?). I therefore assume that the regular prevocalic allomorph in final -y- was restored in the nom. pl.: *māry-ēš* (cf. the discussion of Sturtevant). Since most relevant examples are spelled with a sequence of ambiguous Ce/i sign plus -(e)-eš, it is hard to prove the presence of the y beyond doubt, but note spellings like *ar-ki-i-e-eš* 'testicles' (*KBo* XVII 61 Rs 15; NH ms. of MH/OH text). Even in a copy, it is difficult to motivate the inserted -i- other than by a pronunciation /arkyēs/ versus Grk. *órkheis* < *-eyes. Note also the standard older spelling *ku-i-e-eš* of *kui-* 'who, which'. For /kʷēs/ from *kʷeyes we would expect *ku-e-eš* (which does occur, but only later, and less often than *ku-i-e-eš*). The -i- surely points to /kʷy-ēs/ or perhaps /kuyēs/.

Given the near perfect parallelism between i-stem and u-stem inflection in Hittite, it would not be surprising if the ending /-ēs/ spread to the u-stems: *māri-š: māry-ēš:* : *ḫaššu-š*: x (→ *ḫaššw-ēš*). Nor is it surprising that the ending /-ēs/ would have spread to the i-stem and u-stem adjectives. Given the large number of i- and u-stems in Hittite, the further spread of the ending to all consonant stems is also understandable: of animate consonant stems only those in -nt- remain productive in

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[85] The one apparent example *šu-ur-ki-iš-e[š]* in *KBo* XVII 22 III 10 is to be read *šu-ur-ki-uš*^MEŠ with Neu, *StBoT* 25.208.

Hittite.[86] The spread of *-eš* to the *a*-stems must be considered second-ary, whether one assumes original \*-*ĕs* or -*ēs* < \*-*eyes*. If we assume -*ēs* < \*-*eyes*, one point of entry may have been the *ya*-stems, whose forms would have coincided with those of the *i*-stems in some cases: gen. sg. -*yaš*, abl. -*yaz*, acc. pl. -*yuš*, dat.-loc. pl. -*yaš*. Inherited nom. pl. \*-*yāš* < \*-*yōs* may have been replaced by -*yēs* based on these correspondences.

It may not be accidental that the few pieces of orthographic support in Old Hittite for a long vowel in /-ēs/ all occur in *i*-stems or closely associated types. Note the following examples of scriptio plena -*e-eš* (which cannot, of course, be motivated to show either vowel coloring or accent): *ma-a-ri-e-eš* (*KBo* XVII 33+ IV 8), *zi-in-tu-ḫi-e-eš* (*Bo* 6594 I 14), *ku-i-e-eš* (*KBo* XX 3 Vs 14); *ta-lu-ga-e-eš* and *pal-ḫa-a-e-eš* (*KBo* XVII 22 III 7); *ḫé-e-a-u-e-eš* (*KUB* XXIX 3 I 8), *ḫa-an-te-ez-zi-e-eš* (*KBo* XXV 61 II 1) and *ap-pí-iz-zi-e-eš* (*KBo* XXV 62,9).

With the proviso that the regular *i*-stem nom. pl. \*-*ēš* < \*-*eyes* was remodeled after other case forms as -*yēš* (which makes the analogical spread to the *u*-stems and *ya*-stems much more plausible), I believe that the derivation of nom. pl. -*eš* as /-ēs/ < \*-*eyes* may be upheld.

## 2.4.5. Enclitic Possessives in -*Ciš*, -*Cin*/-*Can* and -*Cet*

It is generally acknowledged that the enclitic possessive adjectives in Hittite show a mixture of *a*-stem and *i*-stem inflection: see e. g. Fried-rich, *HE* I².65. In fact, such a distinction is only meaningful in the anim. nom. sg. and acc. sg., where we find in OH manuscripts -*miš*, -*šiš* and -*šmiš* and -*šan*, -*šman*/-*šmin*. In the neuter nom.-acc. sg. (and plu-ral!) we find the aberrant ending -*et* (for the *e* reading see below). In all other cases the endings of the enclitic possessives are identical to those of the substantives to which they are attached. Since any or all of these may be remodeled after the noun endings, they tell us nothing about the original inflection of the enclitic possessives.

Before turning to the prehistory of the enclitic inflection, we must first discuss in some detail the form and usage of the enclitic possessive in -*et*/-*it*. Otten-Souček, *StBoT* 8 (1969) 72–73, give a statistical survey of the occurrence of the forms -*šet*/-*šit* 'his, her' and -*šmet*/-*šmit* 'their' in the text series *KBo* XVII 1+: nom.-acc. sg. -*šet* 4 × vs. -*šit* Ø, -*šmet* 11 × vs. -*šmit* Ø; with adverbs -*šet* 1 × vs. -*šit* 1 ×, -*šmet* 8 × vs. -*šmit*

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[86] My own files show more than 300 *i*-stem nouns and 70 *i*-stem adjectives, along with 60+ *u*-stem nouns and 25 *u*-stem adjectives. Of animate consonant stems only those in final -*tt*- and -*t*- (40+ examples) and in -*nt*- (125 examples plus participles) show more than a handful of examples.

1 ×; inst.-abl. *-šmet* 2 × vs. *-šmit* 8 ×. Based on the results for the better attested *-šmet/-šmit,* Otten-Souček conclude that there are two distinct forms *-šmit* and *-šmet.* The former occurs with nouns in the instrumental or ablative and has the same ending as the instrumental of the nouns: *-it.* The form *-šmet* occurs with the nom.-acc. sg. nt. of nouns and with adverbs (e.g. *pera(n)-šmet* 'before them'). This suggests that the adverbs are construed as nouns. Neu, *StBoT* 18 (1974) 67 ff, pursues this idea further, claiming that forms such as *peran* and *appan* are old accusative singulars indicating direction: *peram-mit* 'in front of me' would have meant originally 'in the direction of my front'.

A survey of ALL enclitic possessives in *-et/-it* in OH manuscripts points to a rather different conclusion:

| | Nt. Nom.-Acc. Sg. | Adverb | Inst./Abl. |
|---|:---:|:---:|:---:|
| *-(m)met* 'my' | 4 | 0 | |
| *-(m)mit* | 0 | 1 | |
| *-(š)šet* 'his/her' | 26 | 1 | |
| *-(š)šit* | 0 | 4 | |
| *-še/amet* 'their' | 14 | 8 | 2 |
| *-še/amit* | 0 | 2 | 9 |
| *-šummet* 'our' | 1 | | |
| *-šummit* | 0 | | |
| Total *-et* | 45 | 9 | 2 |
| *-it* | 0 | 7 | 9 |

The contrast between the case forms nt. nom.-acc. sg. *-et* and inst. *-it* is fully confirmed: the two examples of *-et* for the instrumental must be regarded as erroneous. The status of the adverbial usage is much less clear. With a nearly even ratio 9: 7 for *-et: -it* it is quite uncertain that forms like *peram-mit* are frozen forms of accusative singular noun plus possessive. If this were true, what would be the motivation for the *-it* spellings? Confusion with the instrumental ending is out of the question: adverbs are never construed with the instrumental. In fact, if there were to be any confusion between nom.-acc. sg. *-et* and instrumental *-it,* we should find it in the synchronic examples of the nt. nom.-acc. sg. with nouns, not in the frozen adverbial expressions which are not part of a noun paradigm. There simply is no model for the remodeling of *-et* to *-it* in these forms, but seven examples out of sixteen cannot be dismissed as errors.

If we examine the adverbial examples more closely, we find that the -et and -it spellings are nearly in complementary distribution. Out of the nine examples with -et (all in the *KBo* XVII 1 series), eight occur in the structure Noun (gen.) + Adverb + Enclitic Possessive: e.g. LU-GAL-*aš* SAL.LUGAL-*ašš-a kitkar-š(a)met* 'at the head of the king and queen'. The only exception is *šer-š(e)met-a* 'but over them' (*KBo* XVII 1 I 31). On the other hand, all but one example of -it occur in the simple structure Adverb + Enclitic Possessive: e.g. *perazmit* 'before them' (*KBo* XVII 1 III 45). The single exception is LU MEŠDUGUD-*aš* LU.MEŠ ŠUKUR.ZABAR *pirašmit ašanzi* 'The men of the bronze spears sit in front of the dignitaries.' Even here the noun LU.MEŠDU-GUD-*aš* does not strictly speaking form a syntagm with *pira(n)-šmit*. The fact that we find the -et spelling just where we have a preceding possessive noun is surely not accidental.

Because the structure Adverb + Enclitic Possessive is replaced within the historical period of Hittite by Adverb + Enclitic Dative (*šer-šit-wa* in OH ms. *KBo* VI 2 vs. *šer-wa-ši* in MH copy *KBo* VI 3), Otten-Souček, Neu and others have concluded that the structure Adverb + Enclitic Possessive (< Noun + Enclitic Possessive) is an archaism. However, the alternate structure with a freestanding adverb and an enclitic anaphoric pronoun in the dative is well attested already in Old Hittite: cf. *ug-a-šmaš-šan* ERÍN.MEŠ-*an šer* III-*ŠU wahnumi* 'I whirl over them the troops three times.' (*KBo* XVII 1+ II 31–32). Evidence from other old Indo-European languages suggests that *this* structure is inherited, while there is no evidence for Adverb + Enclitic Possessive.[87]

Furthermore, the distribution of -et and -it spellings betrays the secondary nature of the Adverb + Enclitic Possessive type. The first stage in the development involved dative forms: expressions like *pedi-šši* 'in his place' (a genuine collocation of noun + enclitic possessive) came to function as 'in place of him' (cf. the English). It could then serve as the model for *šer-šī* 'over/for him' (attested in OH at *KUB* XXXVII 223 Vs 4; the form is complete as given, and there is no justification for an emendation to -*ši-i⟨-it⟩*). One may assume the existence also of *pera(n)-šši, *appa(n)-šši*, etc. Despite their locatival function, however, *šer, peran* and *appan* did not look like locatives of nouns. There was

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[87] The forms which become preverbs and prepositions are still independent adverbs in PIE and in the oldest stages of Greek, Indic and Hittite. For a Greek example see Meillet, *Intro.* 193, While for Sanskrit compare RV 8,92,20: *yásmin víśvā ádhi śríyaḥ* 'In/by whom all splendors (are) present'. Likewise, Starke, *StBoT* 23 (1977) 172, argues that Hittite expressions such as *andan É-ri* are still appositional in Old Hittite: 'inside, in the house' (not preposition plus object).

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thus an incongruity between the form of these quasi nouns and their dat.-loc. possessives. Since *šer, peran* and *appan* looked like nt. nom.-acc. sg. (cf. *pēr* 'house', *kēr* 'heart', *iugan* 'yoke'), congruity was achieved by mechanically adding *-t* to the dat.-loc. forms: hence *šer-šit*. The real origin of these forms is shown, however, by their *i* vocalism. The last step was the complete reinterpretation of these structures as noun + possessive, which permitted the preposing of a possessive noun: hence the example 'at the head of the king and queen' given above. Only in this full-blown possessive structure of Noun (gen.) + Adverb + Enclitic Possessive was the assimilation of the enclitic complete: hence 'correct' *e* vocalism *-šmet*.[88]

As the table above shows, the only genuine form of the nt. nom.-acc. sg. is *-et*. We may now return to the origin of the inflection *-iš, -in / -an*, *-et*. Sturtevant, *CGr*[1].101, reads the *i*-forms with *e* vocalism and derives them from dative enclitics *-me* and *-te* (sic!) which he finds in the first Arzawa letter (*VBoT* 1). OH spellings in *-iš* and *-in* demand *i* vocalism, and the forms *-mi* and *-ti* in the Arzawa letter are merely dat.-loc. of the possessive adjective. Pedersen, *Hitt.* 59, suggests that *-miš* comes from *\*-meyos*. Kronasser, *VLFH* 113 and 146, supposes *\*-meyos* > *\*-miyaš*, then secondarily *-miš*. Schmidt, *Stammbild. und Flexion d. idg. Personalpronomina* 83, raises the possibility of different syncope results in enclisis, deriving both *-i-* and *-a-* from *\*-eyo-*. The only known result of *\*-eyo-* in Hittite is *-a-*: cf. pres. 3rd pl. *waššanzi < \*woséyonti*. Schmidt's comparison with HLuv. *ami-*, Lyc. *emi-*, Lyd. *ēmi-* 'my' is false. These forms, like CLuv. *t(u)wi-* 'your' are clearly built on the stem of the stressed personal pronouns *amu* and *tu*. They can thus have nothing directly to do with the Hittite enclitic possessives which show the stem of the enclitic pronouns *-m(u), -tt(a)*, not those of the stressed pronouns *amm-el, tw-el*.

For the inflection of enclitic pronominal stems in PIE *e, i* and *o*-vocalism are all easily conceivable. For *o*-vocalism compare Hitt. acc. sg. *-an* 'eum'. For *i*- vocalism one may point to Lat. *is, id* and OLat. *im*, but note also OLat. *em* and *ed-* (in *ec-ce*). A form like *-šan* 'his' may therefore be taken directly as *\*-so-m*, with a stem *\*so-* (whether one relates this to the reflexive or anaphoric use of this stem may be left open). If we take *-miš, -šiš*, etc. as reflecting old *\*-mi-s, \*-si-s*, then we must assume likewise a neuter *\*-mi-d, \*-si-d*, and a change of *\*i* to *e* before a

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[88] It is also the structure Noun (gen.) + Adverb + Possessive which permits the type *ammel appan* 'after me' (*KBo* III 22 Rs 49), with a stressed personal pronoun in the position of the noun.

dental stop in enclisis. Alternatively, one may reconstruct *-*me-s*, *-*se-s*, *-*me-d*, *-*se-d*, and assume that the regular change of unaccented *ě to *i (2.2.6.2) did not take place before a dental stop.[89] Finding parallels or counterexamples for either of these proposed special developments is virtually impossible. Happily, there is a form which settles the issue. In *KBo* XXII 1, 29 we find ᴸᵁ*ašiwandan-a šēt* (*ši-e-et* by 1.3.4), which has been convincingly interpreted by Starke, *StBoT* 23 (1977) 176, as a Hittite partitive apposition in the accusative: 'the poor man, his (things)' = 'the things of the poor man'. We have here in accented position the nom.-acc. sg. nt. of the possessive adjective. Since *e* under the accent in Old Hittite can represent only *ě, not *i, we may conclude that the Hittite possessive adjectives are based on thematic stems *me/o-, *te/ o-, *se/o-. The *i* inflection of the anim. nom. and acc. sg. is secondary by the regular change of unaccented *ě to *i in Hittite. Apparently this change was blocked in the environment of a following dental stop, hence enclitic -*šet* identical to accented *šet*. The Hittite possessive adjectives are thus comparable in form to Av. *ma-* 'my' and, mutatis mutandis, to Grk. *emós* and *sós* 'my' and 'your'. Whether we are dealing with a common inheritance or independent creations is uncertain.


## 3. *e* and *i* in Middle Hittite

With a single exception (see 3.2.7), there are no changes in the status of *e* and *i* from Old to Middle Hittite. In judging the spelling of *e* and *i* in Middle Hittite manuscripts, we must bear in mind the fact that even our limited corpus (1.2) may contain manuscripts which are not Middle Hittite compositions but rather copies of Old Hittite texts. Judging from the Middle Hittite copy of Table I of the Laws (*KBo* VI 3), the spelling of *e* and *i* in such manuscripts is not reliable (cf. note 63).


### 3.1. Consistent *e* in Middle Hittite

#### 3.1.1. MH *e* < PIE *ě

##### 3.1.1.1. Examples of *e* < *ě in Root Syllables

Several OH examples are confirmed by MH attestations: *eš-* 'be', *ḫuet-tiya-* 'pull', *kuen-* 'kill', *mekki-* 'much', *menaḫḫanda* 'toward, facing',

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[89] Theoretically, I suppose, one could take the *i*-forms from old *i and the neuter from old *-*ed*, but this seems egregiously ad hoc, and an original paradigm *-*is*, *-*im*, *-*ed* seems strange in the face of *kuiš, kuin, kuit*.

mer- 'disappear', nepiš- 'heaven', peran 'before', peda- 'place' (plus pedaš-šaḫḫ- 'put in one's place'), šer 'above', šeš- 'sleep', tuekka- 'body', tepu- 'few' (plus tepnu- 'belittle') tekan 'earth', wemiya- 'find', wešš- 'wear'.

Additional examples are provided by giemi 'in winter',[90] A.ŠÀkuera- 'field' < *'section' to *kʷer- 'cut', karēpanzi 'they devour' < *ghrébh-n̥ti,[91] nekumant- 'naked' < *negʷ-,[92] newaḫḫ- 'make new' < *neweh₂-, nekuzzi 'grows dark' < *négʷ-ti, šek-teni 'you know' < *sek-,[91] tek-kušša- 'show' < *dekʷso-.[93]

Spelling notes: most of these examples are spelled consistently with e, including several with scriptio plena: me-e-ek-ki (KUB XL 28,6), ne-e-u-wa-aḫ-ḫa-an-du (KUB XXXI 87+ II 15), ne-e-pí-iš (KBo VIII 35 II 12), te-e-kán (ibid.). The examples ḫuettiya- and peran are attested only in the ambiguous spellings ḫu-IT-ti-ya- and PÍ-ra-an, but there is no evidence to suggest that they should not be read with e like the others. Beside expected me-er-° 'perish' (KBo XVI 25 I 43) and te-ek-ku-uš-ša-° (ibid I 57), we also find mi-ir-° (IBoT I 36 I 53) and ti-ik-ku-uš-nu-° (KBo XVI 46 Vs 17). Since neither of the latter manuscripts is an assured Middle Hittite composition, these i spellings are hardly probative. It is particularly noteworthy that these same two manuscripts show other anomalous i spellings (see further below).

## 3.1.1.2. Examples of e < *ě in Suffixes

The e-grade forms of the *-ye-/-yo- suffix continue to be spelled with e in Middle Hittite. In addition to unambiguous spellings such as lam-ma-ni-i-e-u-e-ni (KBo XVI 50 Vs 17) and nu-un-tar-ri-e-ed-du (KBo

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[90] Since gi-e-mi is attested only once, in a manuscript which cannot be assured as a MH composition (KUB XIII 1 IV 12), it cannot be absolutely excluded that we have merely a faulty spelling for gi-im-mi, like hapax li-e-ši for li-iš-ši 'liver'. If the spelling is genuine, it can only reflect /gyěmi/, equal to Lat. hieme, for two reasons. First, if we were dealing with the loc. sg. of an n-stem (like Grk. kheîma or kheimṓn), then *ĝheímn-i would lead to gimmi with double -mm-: cf. mimm(a)- < *mimn- and gimm-ant- 'winter'. Second, either *ĝheim- or *ĝhim- would lead to Hitt. /gim-/ with i-vocalism, since *ei > i after velars (2.2.5). We have already discussed the fact that the sign GI does not always equal /ge/: see note 58. For the assumption that both /gyem-/ < *ĝhyem- and /gimm-/ < *ĝheimn- survive into Hittite, compare the coexistence of the root noun wid- 'water' < *wed- beside the r/n-stem watar/wetan-.

[91] For the e-grade in these forms see Jasanoff, Heth. und Idg. (1979) 79 ff.

[92] For the e-grade in nekumant- compare Arm. merk.

[93] Hitt. tekkušša- 'show' equals Av. daxša- 'teach' (A. Goetze). Pace Oettinger, StBoT 22 (1976) 54, there is no proof that this verb is an original -ye-/-ya-stem, since none of his examples for this stem are from Old or Middle Hittite manuscripts. Nor do the examples of absolute use argue against an original transitive verb.

XVI 25 I 7), we also find ambiguous examples like *lam-ni-IZ-zi* (*IBoT* I 36 I 30) and *nu-un-tar-ri-ID-du* (*KBo* XVI 25 I 66). The latter may also safely be read as /-ye-/ according to the arguments presented in 2.1.1.2.[94]

Nothing prevents us from also reading the ambiguous spellings *kappu-u-IZ-zi* (*IBoT* I 36 I 46), *šu-ú-IZ-zi* (*KBo* XVI 25 IV 5), and *šu-ú-IT* (ibid. I 68) as -*ez-zi* and -*et* according to their origin from *-*ye*- (see again 2.1.1.2). In *KUB* VIII 81 III 7, where the intervocalic *$^*$y* in the latter verb seems to have been restored, the *e* vocalism is overt: *šu-u-i-e-ez-zi*.

One also finds *e* where the *y* is part of the root: *en-ta-ri* 'they go' (*KUB* XL 28,1) for *h₁y-ónto-ri*,[95] *ti-i-e-ez-zi* 'steps' (*IBoT* I 36 I 48.49) as in Old Hittite.

There are six examples of abstracts in -*eššar* in MH texts, all spelled with *e*: *gIpeššar, ḫanneššar, ḫalkueššar, išḫueššar, š(i)yeššar* and *duddumeššar*.[96]

The *e*-grade forms of the iterative suffix are spelled regularly with ambiguous *KI*, but there are two examples confirming *e* vocalism: *še-eš-ke-e-ed-du* (*KUB* XIII 1 I 27) and *zi-ik-ke-eš* (*KUB* XIV 1 Rs 21).

### 3.1.1.3. Other Examples of *e* < *$^*$ě*

There are *NO* exceptions in MH manuscripts to the *e* spelling of the first and second plural verb endings -*wen(i)*/-*men(i)* and -*ten(i)* (in over seventy examples). Note the spelling -*te-in* (*KUB* XXXVI 114,19) according to 1.3.4. The scriptio plena *ú-me-e-ni* (*KUB* XL 28,4) may reflect the accent (cf. 2.1.1.3), but see also *ku-e-u-e-en* (*KBo* XVI 47 Vs 15) and *[i]-ši-ya-aḫ-ḫu-e-en* (*KUB* XXIII 77 Vs 30).

The preverb *pe* is spelled consistently with *e*: *penna-, peššiya-, pé-e-da-*/*pé-da-, pé-e-ḫu-te*/*pé-ḫu-te-* (by 1.3.2) and standing alone *pé-e* (*KUB* XXVI 17 II 12). As already discussed (note 29), the development in *PÍ-i-e-*/*PÍ-ya-* 'send' (thus regularly in MH)) is uncertain, given the

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[94] The first plural *ḫal-zi-e-u-[en]* in *KUB* XXIII 77 Vs 11 does not represent *e* for *i* (/-ewen/ for /-iwen/), but rather /-yewen/ after the analogy of the -*ye-*/-*ya*-stems, just like later /-yaweni/ in *ḫalziyaweni, piyaweni*, etc. For *e*-grade in the first plural cf. *lam(ma)niyeweni* above.

[95] The *e*-vocalism in the third plural middle *(i)enta(ri)* is secondary after the singular (cf. active *ienzi* after *iēzzi*). The spelling *entari* reflects the regular loss of initial *$^*$y* before *$^*$ě*: cf. *ega-* 'ice' < *$^*$yego-*. Usually the *y-* is restored in *ye-* 'make' and *ye-* 'go' after the forms of the paradigm in *ya-*.

[96] It is very difficult to determine whether the -*i-* of *i*-stems is deleted before the -*eššar* suffix. One could also read *du-ud-du-mi-eš-šar* as /duddumyessar/.

unique environment. The unusual spelling *pé-e-ya-an-za* in *IBoT* I 36 I 12 is certainly not solid evidence for a reading /peya-/, given the number of anomalous *e/i* spellings in this manuscript.

The vowel of the reduplicating syllable is spelled *e* in *ú-e-wa-ak-ki* (*KUB* XIV 1 Rs 88) and always in *mema-/memi-* 'speak'.

### 3.1.2. MH *e* < PIE *$eh_1$

OH examples of *e* < *$eh_1$ are confirmed by MH occurrences: *ye-* 'make' (plus *piye-* 'send' and *uye-* 'send'), *ganešš-* 'know', *te-* 'say' (plus *pehute-* 'bring' and *wete-* 'build'). For a stative in *-$eh_1$- see *hu-iš-ú-e-te-en* 'you stayed alive' in *KUB* XIV 1 Vs 12.[97] Inchoatives in *-ešš-* are represented by *alpuešš-, makkešš-* and *tepawešš-*. Beside these examples the ambiguous *ha-at-KIŠ-nu-* 'besiege' (*KUB* XXXI 86 II 36) may be safely read /hatkesnu-/.[98]

The two uncertain examples of *$eh_1$, namely *ēp-* 'take, seize' and *lē* (prohibitive negative), are also well attested in MH texts with *e* spellings.

### 3.1.3. MH *e* < PIE *$\bar{e}$

All the OH examples of *e* < *$\bar{e}$ are confirmed by MH attestations: *eš-* 'sit', *ešhar, et-/ez-, mehur, weh-* and *wek-*. In addition we find *šehunant-* 'urine' to *šehur* (formed like *mehur*) and also *KI-IR* 'heart' (*KUB* XL 28,2, and *KBo* VIII 35 II 21) and *PÍ-IR* 'house' (*KBo* V 7 Vs 9). Despite the lack of plene spellings of 'heart' and 'house' (the nom.-acc. of neither is well attested), the strong evidence for *e* as the only result of accented long *$\bar{e}$ justifies a reading of these as /kēr/ and /pēr/. On MH *ini* beside OH *eni* see 3.4.2.

The first plural pronoun *wēš* 'we' with long *$\bar{e}$ by contraction is also attested in Middle Hittite.

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[97] Oettinger, *Stammbild.* 330 ff, attempts to explain this verb as a *-ye-/-yo-* stem *$h_2wesuye/o$-, but this derivation cannot account for the *e*-grade in the second plural, since Hittite generalized *o*-grade (i. e. *-ya-*) in this form (as stated by Oettinger himself, ibid. 344!).

[98] The prehistory of *tamašš-/tamešš-* 'oppress' (attested in *IBoT* I 36 I 6. III 59) is problematic. Oettinger, *Stammbild.* 124, derives *tamašš-* from either *$demh_2s$- or *$dmh_2s$-, but 'vocalization' of laryngeals in Hittite is highly dubious, and even with assumption of an anaptyctic vowel, the double -*šš*- still remains unexplained. Oettinger declares that the unique *a/e* ablaut in a *mi*-verb is secondary after the *hi*-conjugation, but it is not clear why this one verb should have undergone such influence.

### 3.1.4. MH *e* < PIE *$^*Vi/Vh_1i$*

Once again MH attestations confirm OH examples: *eḫu, ḫantezziya-, ne(a)-, we-* 'come', *te-(ḫḫi)*; *apē, kē* (anim. nom. pl.), dat. sg. *-šše*, oblique stem *aped-, ked-, kued-* (plus *šed-* 'this' and *tamed-* 'other') and ablatives *apēz, kēz* and *kuēz*, and finally *apē, kē* and *kue* (nt. nom.-acc. pl.). For *utnē* 'land' note KUR-*e* and for iteratives in *-ške-* to stems in *-āi-* compare beside *ḫatreške-* also *ḫanteške-* to *ḫandāi-* 'arrange', *mukiške-* to *mugāi-* 'entreat', and *dammišḫiške-* to *dammišḫā(i)-* 'harm' (see 3.2.7 for the *i*-spelling in the last two).[99]

Spelling notes: beside regular anim. nom. pl. *ke-e* and *a-pé-e* we find anomalous *ki-i* in KBo XVI 46 Vs 12.18 (on this manuscript see already above!) and in *KUB* XXXVI 114,15, which belongs to a group of texts often assigned to Old Hittite on independent grounds.[100] The oblique stems *aped-* and *ked-* are, of course, spelled *a-PÍ-da-* and *KI-da-* as well as unambiguously *a-pé-e-da-* and *ke-e-da-* by 1.3.2. The stem *šed-* is spelled *ši-e-ta-ni* (*KUB* XIV 1 Rs 36) and *tamed-* likewise *ta-mi-e-da-* (*KUB* VIII 81 III 10.15) as well as *ta-me-e-da-* (*KUB* XIV 1 Vs 35) according to 1.3.4. Beside ambiguous *ú-IZ-zi* and *ú-IT* there is also attested *ú-e-ez-zi* (*KBo* VIII 35 III 14.16, *KUB* XXVI 20,5), confirming /weṭsi/, /weṭ/. The appearance of dat. sg. *-šši* 'to him' in Middle Hittite beside *-šše* is not a case of alternate spellings nor of phonological merger, but of the analogical replacement of old *-šše* by *-šši* after the dat. sg. ending *-i* of the nouns (see note 37).

### 3.1.5. MH *e* by Anaptyxis

The noun A.ŠÀteripp<i>i-</i> 'plowed field' < *teripp-* 'plow' < *$^*trep-$* 'turn' occurs in *KUB* XIII 1 IV 2, so far as we know a MH composition. It is hard to determine from internal Hittite evidence whether the initial *ter-* contains a real or merely graphic anaptyctic *e*. The fact that the *e* spelling is consistent (vs. such cases as *šamen-/šemen-* 'withdraw' = /smen-/) is suggestive of a real vowel, but neither the noun nor its base verb is well enough attested to assure that the lack of alternate spellings is significant. Confirmation that the *e* is genuine comes from the parallel case of 'three', which appears in Hittite consistently (at least 4×) as

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[99] Based on its phonology, the word *meyani-/me(y)ana-* attested in the expression MU$^{TI}$ *meyaniyaš* (*KUB* XVII 21 III 14) also reflects a preform *$^*meih_1o$-°: f. *ne(y)a-* < *$^*neih_1o$-*. The precise meaning of the word and its possible relationship to *mena-/meni-* 'face, cheek' are still uncertain.

[100] See e.g. Otten, *KUB* XXXVI (1955) IV. On the other hand, Carruba, *SMEA* 14 (1971) 88 ff, argues that at least some are MH.

*teri-*. The Luvian correspondent of *teri-* is attested in the extended form *tarriyanalli-* '(officer) of the third rank' (*IBoT* I 36 I 37–39). Luvian *tarri-* shows the regular development of *\*CéC-* to *CaCC-* (see Čop, *IF* 75 (1980) 85 ff), pointing to an Anatolian preform *\*téri-* with real *e*. Since the Luvian indicates that the anaptyctic vowel received the accent in this position, this may also explain the fact that *\*trep-* appears as Hitt. *teripp-*: *\*trĕp-* > *\*tĕrĕp-* > /térip-/ with the unaccented second *ĕ* becoming regularly *i* (2.2.6.2). The spelling of the second vowel in *te-RI-IP-* is, of course, ambiguous, so the change /terep-/ to /terip-/ cannot be absolutely assured. Since the anaptyctic *i* described above in 2.2.7 was doubtlessly unaccented, it is possible to assume with Oettinger, *Stammbild.* 41, that it was also originally anaptyctic *ĕ* (as in *tĕr-* < *\*tr-*), which then became Hitt. *i* because it was unaccented.

### 3.1.6. Other Examples of Consistent MH *e*

Several examples appearing in Old Hittite occur also in MH texts: *ḫalentuwa-, ḫameshant-, wellu-, wete-* and *weši-*. One may add *ēzzan* 'chaff, straw' (?), *genzu-* 'lap', *kutruwen-eš* 'witnesses', <sup>d</sup>*Lelwani-, šekan-* 'span', *kurēwan(i)-* 'independent' (?) and 1-*eaz* 'at one' > 'together' (?).

## 3.2. Consistent *i* in Middle Hittite

### 3.2.1. MH *i* < PIE *\*i*

#### 3.2.1.1. Examples of *i* < *\*i* in Root Syllables

Several OH examples of this type are confirmed by MH attestations: *imma, iwar, it(ten)*, as well as *ḫuinu-, memi(š)-, pi(š)-* 'give' (and *uppi-* 'send'), and the iteratives *išḫiške-, memiške-* and *piške-* (see 2.2.1.1).

We may add *kīnu-* 'break open' < *\*ĝhi-néu-*,[101] *nini(n)k-* 'start up, mobilize',[102] *wiya-* 'cry out' (attested in *wiya-mi*, see 3.2.1.4), and the iterative *wiške-* 'come' < *\*u+i-ske-* (note the plene spelling *[ú]-i-iš-ke-°* in *KUB* XIV 1 Rs 63).

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[101] The plene spelling *ki-i-nu-* (*KUB* XIII 1 IV 7) confirms this derivation and falsifies the claim of Riemschneider that *GI* always spells /ge/: cf. note 58.

[102] Pace Oettinger, *Stammbild.* 143, both the morphology and meaning of *nini(n)k-* are clear. From a root *\*neik-* the expected nasal-infix present would be *\*ni-né-k-ti, \*ni-n-k-énti*. With the usual replacement of *\*-n-k-* by *\*-ne-n-k-* in the weak stem and the change of *e* to *i* before nasal (2.2.6.1) these would give regularly Hitt. *ninikzi, nininkanzi*. The root etymology is that given by Benveniste, *BSL* 50 (1954) 40: *\*neik-* 'start up, set in motion' seen also in Lith *už-nìkti* 'begin', *ap-nìkti* 'assault' (pres. *-ninkù* showing the same nasal-infix present as Hittite) and probably also Grk. *neîkos* 'quarrel'.

### 3.2.1.2. Examples of *i* < *\*i* in Suffixes

Over thirty *i*-stem nouns and adjectives are attested in MH compositions, including the interrogative/relative *kui-*. They show consistent *i* spellings with four exceptions, all anim. nom. sg.: ᴸᵁ*ḫaggazuwaššieš* and ᵁᴿᵁᴰᵁ*zakkieš* (*IBoT* I 36 IV 37 and I 20 respectively, but *zakkiš* ibid. passim), *parkueš* (*KBo* XVI 47 Rs 23) and [ᴸᵁ*šapāšal]lieš* (*KUB* XIV 1 Rs 12). The status of the first manuscript has already been discussed.[103] All four examples are isolated. It is quite doubtful whether the two nouns referring to functionaries may be interpreted as genuine examples of /-es/ in borrowings, as suggested for Old Hittite (2.2.1.2). The plene spelling *ku-i-it* (*KUB* XIV 1 Vs 25) confirming /kʷid/ is noteworthy.

### 3.2.1.3. Examples of *i* < *\*i* in Endings

As in Old Hittite, we find *ki-ššan*, *ini*, and *apIni-ššan* as well as *kuwapi* (on the first vowel of *ini* see below). The *i* of duratives in *-anni-* and related verbs appears regularly as *i*: *penniš*, *unniš-teni*, *iyanni-wan*, *piddānni-wan*. On the unexpected *daliešta* (*KUB* XIV 1 Vs 5) see 3.2.7 below.

Instrumental *-it* is spelled consistently with *i*, including *ḫa-aš-ti-i-it* (*KUB* XIII 27 Vs 23). The one exception is *ḫu-u-ma-an-te-et* (*KUB* XXXVI 116,6). On the general problem of the sign *TE* see further below.

The dat.-loc. singular continues to be spelled consistently with *i*, including the plene spellings *ki-iš-ša-ri-i* and *šar-kán-ti-i* (*IBoT* I 36 III 4 and 22, but note the ms.) and *iš-ḫi-i* (*KUB* XXVI 17 II 5). Note also correct *kat-ti-ti* 'with you' in *KUB* XIV 1 Rs 60. Again the single exception involves the sign *TE*: *ḫu-u-ma-an-te-y[a]* in *KUB* XIII 1 IV 14.

### 3.2.1.4. Examples of *i* < *\*i* in Prefixes

In addition to *mimma-* 'refuse' we also find *lilḫ(u)w(a)-*, iterative to *laḫ(u)w(a)-* 'pour', *tit(ta)nu-* 'install' based on *titty-*, *išḫiul* 'treaty' based on *išḫy-* and *išḫueššar* 'abundance' based on *išḫ(u)w(a)-*. Another iterative *ḫi* verb with *i* reduplication is *wiwy-* 'cry out' (3rd sg. *wiwāi*), iterative to *wāi*, *wiyanzi* 'idem'. The same manuscript *KUB* XIV 1 Rs 91–93 shows *wāi*, *wiwāi* and *wiyami*, the last being backformed

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[103] One fact which suggests that *IBoT* I 36 may be a copy is the presence of several interpolated sections in tiny script, which have the appearance of corrections.

from the third plural, like *ḫuyami* 'I run' after *ḫuyanzi*, replacing earlier *ḫueḫḫi*. The verb *widā(i)-* 'bring' represents *\*wi-dhh₁-āye-*.[104]

## 3.2.2. MH *i* < PIE *\*ih₁*

The stems *ḫalzi-*, *ḫalzišša-* and *išša-* continue to be spelled with *i* in Middle Hittite.

## 3.2.3. MH *i* < PIE *\*ī*

The adjective *mašiwant-* 'how/as much' is formed with the possessive suffix *-want-* from a base *maši* 'idem'. The latter represents a frozen anim. nom. sg. *\*maš* + deictic *-ī* just like *aši* (see 2.2.3 with references).

## 3.2.4. MH *i* < Syncope of *ye/ya*

We find *ti-in-ti-eš* /tintēs/ and *ḫu-u-la-LI-IT-ta-at* /hulalitad/ at *IBoT* I 36 II 48 and III 39: cf. also *šu-u-un-ta-an* /suntan/ ibid. II 41 for usual *šuwant-* /suwant-/ 'full'. The same manuscript also has regular *t(i)yanteš* at II 53. The adverb SIG₅-*in* 'well' attested at *KUB* XXXI 105,4 may be interpreted as a syncopated nt. nom.-acc. sg. of *lazziyant-* 'good': /latsin/ for regular /latsyan/. Iteratives of stems in *-ye-/-ya-* are all spelled consistently with *i* in MH historical texts: *ilališke-*, *šakkuriške-*, *wemiške-*, IGI-*wandariške-*.

## 3.2.5. MH *i* < PIE *\*ei*

The examples *ki-* 'lie', *kiš-* 'become; happen' and *kinun* 'now' are all attested in Middle Hittite. As in Old Hittite, *KI-IT-ta* and *KI-nu-un* are always spelled ambiguously, while *kiš-* does show clear plene spellings: e.g. *ki-i-ša-an-ta-at* (*KBo* XVI 47 Vs 3).

## 3.2.6. MH *i* < PIE *\*ě*

### 3.2.6.1. Examples of *i* < *\*e* + nasal

In addition to *innara-* and *manninkuwan* and the verbs *ḫarni(n)k-*, *li(n)k-*, *nini(n)k-* and *šarni(n)k-*, we find also *imiya-* (correct *immiya-*) 'mix (in)' < *\*en-my-e-*.

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[104] Hitt. *widā(i)-/wedā(i)-* 'bring' is not yet attested in OH manuscripts, but all MH manuscripts show *i*-vocalism. The late forms with *e* either reflect a sound change in Neo-Hittite or confusion with *wete-/wite-* 'build': see 4.4.2 with references. For details of the derivation of *widā(i)-* see Excursus II.

### 3.2.6.2. Examples of $i$ < Unaccented *$\breve{e}$

The OH examples cited above recur in Middle Hittite: *idalu-, kiššar-* and *nepiš-*, as well as the uncertain *ḫuišnu-, ḫuišwatar* and *ḫuišwe-*. Beside OH *kištanziya-* 'starve' compare *kišt(u)want-* 'hungry' < *Kestwént-*. The *i* spelling of *uškišgatalla-* 'watchman' in *KUB* XIV 1 Vs 23 may also be attributed to a shift of accent toward the end of the word with addition of the agentive suffix *-talla-*. See also 3.1.5 on ^A.ŠÀ*terippi-* 'plowed field'. Likewise *igait* 'has frozen' (*VBoT* 1,27) may reflect regular *(y)ĕgāyé-* vs. *ega-* 'ice' < *yégo-*.[105]

### 3.2.7. MH $i$ by Anaptyxis

For the most part, we find MH $i$ in the same environment as OH anaptyctic $i$. Note the following iteratives in *-ške-* from stems in a final guttural: *maniyaḫḫiške-, ḫukkiške-, išiyaḫḫiške-, ḫarninkiške-, linkiške-, parḫiške-, šanḫiške-,* ÌR-*naḫḫiške-*. There is also surely anaptyxis in *appiške-* and *terippiške-*. The pres. 3rd sg. *takkišzi* is spelled with $i$ in *KBo* XVI 25 I 54 and *KUB* XXXVI 127 Vs 13, likewise *takkišteni* in *KUB* XXIII 77 a Vs 12, etc. However, we also find *šarninkeške-* and *appeške-* (*KUB* XXIII 72 Vs 28, Rs 60) and *takkešta* (*KUB* XXXVI 114,15). The latter manuscript is suspect as a copy of an OH text, but the former is not. Recall that beside expected *ḫanteške-* and *ḫatreške-* with secondary *e* from *āi* we find also *mukiške-* and *dammišḫiške-* (3.1.4). We must also remember *dalešta* beside *memišta* (3.2.1.3).

The overall MH data shows that there is no phonological merger of *e* and *i*, either generally or in unaccented syllables. Note that iteratives from verbs in *-ye-/-ya-* and from those in *-i-* are spelled consistently with $i$ (3.2.1.1 and 3.2.4). It can hardly be accidental that the confusion of *e* and *i* affects just those forms with anaptyctic $i$ and secondary *e* from *āi*. It is likely that these two changes were lost as synchronic phonological rules, leaving the formation of the respective iterative stems irregular. Since neither the process for forming *mugeške-* from *mugāi-* nor for forming *šarninkiške-* from *šarnink-* was understood, either *-eške-* or *-iške-* became acceptable for bases in a final guttural or labial. This confusion of *e* and *i* in Middle Hittite limited to iterative stems from bases in final guttural or labial gradually spread in Neo-Hittite to other iterative stems (see below 4.2.7), but Middle Hittite clearly shows its original highly restricted locus. Likewise, since the *i* vocalism of *takkišzi, takkišta,* etc. was not supported by an *i* or *y* any-

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[105] Forms of the verb spelled *egai-* could, of course, easily be due to the influence of the base noun *ega-*.

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where else in the paradigm, loss of the anaptyxis rule would leave these instances open to the influence of the more numerous type of *ganeš̃-, tameš̃-* and inchoatives in *-eš̃-*: hence *takkešta* like *ganešta*. MH *dal-iešta* /dalest(a)/ for OH *tališ* (see 2.2.1.3) must also be analogical after this class. Once again, the confusion of *e* and *i* in stems in *-eš̃-* and *-iš̃-* spreads in Neo-Hittite.

### 3.2.8. Prothetic *i* in Middle Hittite

The OH examples *išgar-* 'stick' and *išpantuzzi-* 'libation (vessel)' are repeated in Middle Hittite. In addition there are attested *išḫamatalla-* 'singer' < *$sh_2em$-, *iške-* 'smear, anoint' < *$ps\text{-}s\hat{k}e$- (see 2.2.8), *išpart-* 'escape' < *$sperdh$-, *ištanza(n)-* 'soul' < *$pst\bar{e}n$-, and *ištamaš̃-* 'hear' < *$stom$-.

### 3.2.9. MH *i* < PIE *$\bar{e}$

Three possible examples of PIE *$\bar{e}$ > Hitt. *i* after *$h_2$ were discussed above in 2.2.9. Support for this development in MH texts includes first of all examples of the pret. 3rd plural ending *-ēr* appearing as *-ir* after stems in final *-ḫḫ-*: *za-aḫ-ḫi-ir* 'they struck' (*KUB* XIV 1 Vs 63), *pēdaš-šaḫ-ḫi-ir* 'they put in his place' (ibid. Vs 65) and *ÌR-na-aḫ-ḫi-ir* 'they enslaved' (*KUB* XVII 21 III 7). As we shall see in 3.4 below, the pret. 3rd plural ending continues to be spelled as *-e-er* regularly in Middle Hittite. The exceptional *-ḫi-ir* is consistent on through Neo-Hittite. It is difficult to motivate the lack of *e* spelling orthographically. The sign ḪÉ is attested in words like *ḫekur* and *ḫeu-*, where it represents /ẹ/. One might also expect at least an occasional plene spelling *-ḫi-e-er* or *-ḫé-e-er,* if the ending were the expected /-hēr/. We must read /-hir/ with *i* vocalism, which is difficult to explain analogically, since the verbs in final *-ḫḫ-* are either athematic *mi-*verbs or *ḫi-*verbs, classes which show /-ēr/. I therefore assume a phonological change of *$\bar{e}$ to *i* after *$h_2$, as already suggested by OH $^{\text{E}}$*ḫištā* < *$h_2\acute{e}st(h_2)o\underaccent{\circ}{i}o$-.

Another MH example of this development is found in the form *ḫiš-wandari* 'lie open' (*ABoT* 60 Vs 17). The stem *ḫišwā(i)-* 'be open' appears to be derived from the verb *ḫaš(š)-* 'open' with a suffix *-wā(i)-* which also is found in *enumā(i)-* 'be(come) overheated' < *inu-* 'heat, make warm' and *esḫarnumā(i)-* 'be bloody' < *esḫarnu-* 'make bloody'. The last two examples show the usual Hittite dissimilation of *-uwV-* to *-umV-*. An original unitary suffix *-wā(i)-* is a priori implausible. The inflection suggests an original denominative formation in *-ā(i)-* to a stem in *-wa-*. Since either *$\breve{e}$ or *$o$ would appear in Hittite as *a* after

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initial ḫ-, the attested vocalism ḫišwā(i)- can only reflect a lengthened-grade *h₂és-wo-.[106]

### 3.2.10. Other Examples of Consistent MH *i*

Several OH examples appear in Middle Hittite: -ila in apaš-ila, išiaḫḫ-, LÚkīta- and nawi. One may add Éarkiu- '?', arrIra- 'rub', ḫazziu- 'cult' (?), ḫappInant- 'rich', ḫanišš- 'plaster', ilaliya- 'desire', iškidaḫḫ- 'signal', kušiši- (a garment), lIlIwaḫḫ- 'hasten', mališku- 'weak', pIddāi- 'furnish', šittari- 'sun-moon-disc', šiš(d)- 'prosper', tilIpuri- '?', dam-mišḫa- 'harm'. The suffix -ili- is also attested in tarḫuili- 'powerful' and in the adverbs Ḫattili, ḫilammili, Luwili, Nešumnili.

### 3.3. Alternating *e* and *i* in Middle Hittite

No sure examples of *e* and *i* alternation in the sequences *wet / wed / wes* are attested in Middle Hittite, but there are very few relevant examples. On the family of ḫuiš- 'live' see 3.2.2.6.

As for the sequence -ęnC-, the pronominal genitive plural ending is attested as -enzan in apenzan and regularly in šumenzan 'your' (including twice šu-me-in-za-an by 1.3.4), but we also find once šu-mi-in-za-an (KBo XVI 29 Vs 9) like OH kinzan (see 2.3). The verb ḫi(n)k- 'offer', med. 'bow' is spelled consistently with *i*, as is ḫinkan 'fate' > 'death'. One may wonder whether the consistent *i* for *ę* in this group is due to analogy with the numerous class of verbs in -i(n)k- (see 2.2.6.1). The verb ḫenk- with its *e* vocalism would have been unique.

The alternation of *e* and *i* in iteratives and in the type of takkišta/tak-kešta has already been discussed in 3.2.7.

Two apparent cases of *e* and *i* alternation do not exist. IBoT I 36 shows Égašgaštepa- in I 8. II 28. IV 27, but kāškāštipa- in I 67. This does not reflect a genuine alternation *e: i*, but rather the occasional use of the sign TE in the value /ti/. The latter usage also appears in ḫūmantet (KUB XXXVI 116,6) and ḫūmante-y[a] (KUB XIII 1 IV 14). In view of examples like ḫaštīt and consistent dative-locatives in -i, a phonological change in these forms is excluded. The fact that we are dealing with a graphic, not linguistic, variation is confirmed by the MH spelling pít-te-(ya)-an-tX- for 'fugitive' (KUB XXIII 77 passim, KUB VIII 81 pas-

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[106] Since primary *-wo- appears to take full-grade, not lengthened-grade, of the root (cf. Skt. pakvá- 'cooked'), it seems necessary to view *h₂ēswo- 'open' as a vṛddhi formation to a *h₂o/esu- 'opening': cf. Skt. pārśvá- 'side' beside párśu- 'rib'.

sim). This word is the substantivized participle to *pitty-* 'run' (OH spelling *pIt-ti-*). In this case the *TI* sign (and hence the *TE* sign) represents /ty/: /pittyant-/. Hence a change of *i* to *e* is not in question. Further evidence for the use of TE as /ti/ comes from the famous Neo-Hittite form *wariššatte* 'you come to the aid of' in the Šaušgamuwa Treaty (*KUB* XIII 1 II 35). Since the 2nd sing. present ending of the *ḫi*-conjugation is without exception spelled *-ti* in Old and Middle Hittite, the chances of the above *-tte* being a genuine /-tẹ/ from old *-tₕₑei* are nil. We have rather another (mis)use of *TE* for /ti/.

Similarly, we find in *IBoT* I 36 III 8 ff in quick succession *a-ra-aḫ-zé-ya-az*, *a-ra-aḫ-zi-ya-az* and *a-ra-aḫ-za-ma-az*. Morphologically, this sequence consists of the adverb *araḫza* 'outside' plus enclitic *-ya* 'and' (resp. *-ma* 'but') plus the reflexive particle *-z*. The adverb *araḫza* 'outside' is a frozen ablative of *arḫ(a)* 'boundary'. The Hittite ablative ending *-(a)z* reflects original *-(a)ti* (cf. Luv. *-ati*). This became first *-(az)zi*, then *-(a)z*. The full form *-(az)zi* is preserved only before the enclitic *-ya* 'and': thus *araḫzi-ya* vs. *araḫz(a)-ma* (cf. *kēz kēzzi-ya* 'on this side and that'). The first spelling above with *ZÉ* is historically unjustified, and a change of *i* to *e* in this context is unlikely (cf. the pres. 3rd sg. ending *-zzi*). This apparent misuse of *ZÉ* for /tsi/ (like *TE* for /ti/) makes uncertain the evaluation of the adjective *araḫzena-/araḫzina-* 'foreign' (*KBo* VIII 35 I 26 vs. *IBoT* I 36 III 35). There are unfortunately no OH occurrences, and the morphological analysis in unclear: *araḫzi-na-* < *araḫzi-* or *araḫz-ena-* < *araḫz(a)*? In either case, a genuine *e: i* alternation is unlikely.

## 3.4. Problematic Cases

### 3.4.1. MH Attestations of OH Examples
MH attestations of the problematic cases discussed for Old Hittite essentially confirm the OH spellings. There are no relevant examples of the thematic verbs in *CVRRi-*, while the one instance of the suffix *-zzil* has *i*-spelling: *šarnikzil* in *KUB* XXXVI 127 Rs 12.

Most MH examples of the pret. 3rd plural ending are either ambiguous or show *e* vocalism: *lukkēr* 'they kindled' (*KUB* XIV 1 Rs 54) beside ambiguous *-KI-IR* and *-kIr, šaru(w)ēr* 'they plundered (*KUB* XVII 21 II 5. III 3), *išparter* 'they escaped' (*KUB* XIV 1 Vs 52), *pí-i-e-er* 'they sent' (*KUB* XXIII 12 II 18) and 'they gave' (*KUB* XIV 1 Rs 53), *ú-e-er* 'they came' (ibid. Vs 71 etc.), *da-(a)-i-e-er* /dāyer/ 'they placed' (*KBo*

XVI 27 III 9 etc.), *na-an-ni-e-er* /nannyer/ 'they drove',[107] and ambiguous *ku-e-nIr* 'they killed' (*KUB* XIV 1 Vs 59), *ka-re-e-PÍ-IR* (ibid. Vs 11), etc. The only exceptions are those showing *-ḫi-ir* = /-hir/. As discussed in 3.2.9, these actually support the interpretation of the regular ending as /-er/ < *-*ēre,* as argued above in 2.4.2.

The animate nominative plural ending continues to be spelled regularly *-eš,* and plene spellings in *-e-eš* are not uncommon: *[āš]šawēš* (*KBo* XVI 47 Vs 7), *šuppaēš* (*KUB* XVII 21 II 10 etc.), *šallaēš* (*KUB* XXXVI 118,10), *šulliēš* (*KBo* XVI 27 I 12), *iwarwalliyē[š]* (*KBo* V 7 Vs 25), *damāēš* (*IBoT* I 36 III 44), *šalašḫieš* (*KUB* XXIII 77 a Vs 8 etc.). Note that once again all these examples are *i-* or *u-*stems. The suspect manuscript *IBoT* I 36 also shows nom.pl. *šalašḫiš* (III 67), beside *šalašḫieš* (I 69). As argued above in 2.4.4, the latter should be read as /salashyēs/. Compare *IBoT* I 36 II 37 *ša-a-ri-i-e-eš* and *ša-a-ri-ya-aš* for direct evidence of the /y/. Therefore nom.pl. *šalašḫiš* to an *i-*stem does not show confusion of *i* and *e,* but rather syncope of /yē/ to /i/, a phenomenon particularly well attested in this very manuscript (see 3.2.4). Compare 4.4.1 below.

The use of the enclitic possessives is fully alive in Middle Hittite, as shown by such full structures as *šumenzan-pat kIr-š(e)met* 'your hearts' in *KBo* VIII 35 II 21. This example, as well as the similar *[ ]kIr-šumet* 'our(?) hearts' in *KUB* XL 28,2, shows the expected *e* vocalism of the neuter nom.-acc. sg. and pl. Contrast with this the *i* vocalism of the adverbial example *pira-ššit* in *IBoT* I 36 I 35, although the value of this occurrence is diminished by its source. It is important to note that all examples of the dat.-loc. of the enclitic possessives are spelled with correct *i* vocalism in Middle Hittite.

### 3.4.2. Problematic Cases in Middle Hittite

The fixed anaphoric pronoun *eni* (see 2.1.3) appears in *KBo* XVI 25 I 36.37 as *ini.* This cannot be dismissed as an isolated aberration, since the spelling *ini* is also well attested in Neo-Hittite (beside *eni*). The source of this variation is obscure.

### 4. *e* and *i* in Neo—Hittite

Since *e* and *i* remain distinct in most positions throughout Neo-Hittite, the following survey basically treats the entire period as one. Individual

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[107] The plene spelling *na-an-ni-e-er* shows that all examples of *-ni-IR* should be read as *-ni-er* /-nyer/. This includes *tar-ni-IR* (*ABoT* 65 Vs 10) and *ku-e-ni-IR* (*KUB* XXXIV 40,10). For evidence that these two verbs also were influenced by the verbs in

changes will be taken up as appropriate. However, in order to fully justify the claim of distinct /e/ and /i/ in Neo-Hittite, I have thought it wise to indicate the distribution of individual forms. For this purpose the following special abbreviations are employed: S = Suppiluliuma I, Mr = Arnuwanda II/Mursili II, Mw = Muwattalli, H = Hattusili III, TS = Tuthaliya IV/Suppiluliuma II.

## 4.1. Consistent *e* in Neo-Hittite

### 4.1.1. Neo-Hittite *e* < PIE *$\bar{e}$*

#### 4.1.1.1. Examples of *e* < *$\bar{e}$* in Root Syllables

Many examples from Old and Middle Hittite are confirmed by Neo-Hittite attestations: *eku-* (S, Mr), *ērman-* (plus *Irmaliya-*) (Mr, H), *eš-* 'be' (all), *gēnu-* (and *gInušša-*) (Mr, TS), *kuen-* (all), *kuer-/kuera-* (Mr), *mekki-* (S, Mr, H, TS), *menaḫḫanda* (S, Mr, Mw, H), *mer-* (H), *neku-* (Mr), *nepiš-* (S, Mr, Mw, H), *pēruna-* (Mr), *pIran* (Mr, Mw, H, TS), *pēda-* 'place' (Mr, Mw, H, TS), *šekk-* (Mr, Mw, TS), *šer* (all), *šeš-* (Mr, H), *tekan* (S, Mw, H), *tekkušša-* (H), *tepaw-/tepnu-* (all), *wemiya-* (all).

A few additional examples occur in Neo-Hittite: *weriya-* 'call' < *$werh_1$-*, and the weak stems of the *ḫi*-verbs *ek-* 'die', *er-* 'arrive', *ḫeš-* 'open' and reduplicated *ašeš-* 'set(tle)'.[108]

Orthographic notes: as the citations above indicate, some of these examples are attested in ambiguous spellings as well as with *e*. It is worth noting that Mursili II shows several examples of the locative *pé-e-di* beside usual *PÍ-di,* proving that the latter should still be read *pé-di.* There is no more evidence for '*i*-umlaut' in this word in Neo-Hittite than in Old Hittite. The certain *e* of *pēruna-* and *pēda-* also virtually assures that *PÍ-ra-an* is still /peran/ despite the lack of plene spellings. None of the words listed above shows any clear *i*-spellings, except for the hapax *ku-in-* (*KBo* V 4 Rs 31) beside usual pan-Neo-Hittite *ku-en-.*

#### 4.1.1.2. Examples of *e* < *$\bar{e}$* in Suffixes

As is well-known, the *e*-grade forms of the *-ye-/-ya-* verbs are progressively replaced by *-ya-* in Neo-Hittite. Mursili II does show *šu-ul-li-e-et*

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*-anna-/-anni-* compare the second singular imperatives *tarni, kueni/kuenni* and the NH pret. 3rd singulars *tarništa, kuenništa.*

[108] Since both *ak-* and *ar-* show exclusively *a* vocalism in Old Hittite, the weak stems with *e*-vocalism must be secondary after the *šakk-/šekk-* type (cf. note 91). The presence of *e* next to *ḫ* in *ḫeš-* 'open' must also be analogical, since *$\bar{e}$* would give *a,* and *$\bar{e}$* would give *i* after *$h_2$*. In this case, however, the replacement is already OH: note *ḫešer* in *KUB* XXIX 3 I 5.

'quarreled' and *ḫu-ul-li-i-e-et* 'fought' (a *-ye-/-ya-* stem here is proven by *ḫulliya-*). In view of the pret. third plural *šar-ri-i-e-[er]*, the ambiguous *šar-RI-IT* 'transgressed' (Mr) should probably also be read /sarryet/, though /sarrit/ cannot be excluded (cf. note 73). The ambiguous *kap-pu-u-IT* 'counted' (Mr) may also continue to be read /kapuwet/: see 2.1.1.2. As in Old Hittite, one also finds *-ye-* where the *y* is a root enlargement: *ti-i-e-et* 'stepped' (Mr) and *ti-en-zi* 'they step' (Mw) (the latter, of course, analogical after the singular).

Abstracts in *-eššar* show consistent *e*-spellings in Neo-Hittite. The noun *ḫanneššar* 'judgment' (S, Mr, H) and the derived verb *šaḫešnā(i)-/*BÀD-*ešnā(i)-* 'fortify' (Mr, H, TS) < *šaḫeššar* 'fort(ification)' are multiply attested. Another dozen examples occur scattered through Neo-Hittite from Suppiluliuma I to Suppiluliuma II. I know of no exceptions.

The *e*-grade forms of the *-ske-/-sko-* suffix are spelled exclusively in Neo-Hittite with the ambiguous *KI*. I know of no spellings in *ki-i* to suggest a change of *e* to *i*.

The standard spelling for *kattera-* 'lower' with the oppositional suffix *-ero-* is *e* (Mr, H), but *kat-ti-ra-* also occurs once in Mursili.[109]

The *e* of the verb *damek-* 'press to; cling' (H, TS) reflects a nasal infix: *tṃ-né-k-*.[110]

### 4.1.1.3. Other Examples of *e* < *ĕ*

The regular spelling of the first and second plural verb endings remains that with *e*. Texts of Suppiluliuma I show ten examples with no exceptions, Mursili II over 35 examples with one exception (*-mi-in* in *KUB* XIV 4 I 6), Muwattalli 13 examples with two exceptions (*-ti-ni* and *-ti-in* together in *KUB* VI 45 I 28), Hattusili III 19 examples with no exceptions, and Tuthaliya IV/Suppiluliuma II 15 examples with no exceptions. The examples include occasional plene spellings and also *-mi-e-ni*, *-ti-en* by 1.3.3 and *-te-in* by 1.3.4. Given the above statistics, it is likely that the three exceptions are merely defective versions of *-mi-en*, *-ti-e-ni* and *-ti-en*: cf. the remarks on OH *ni-ku-uš* in 1.3.3.

The preverb *pē* also continues to be spelled with *e*: *pé-e-ḫu-te-/pé-ḫu-te-* (S, Mr, H, TS), *penna-* (Mr, H, TS), *peššiya-* (Mw, H, TS) (beside *piš-*

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[109] Since the PIE oppositional suffix is attested as *-ero-* as well as *-tero-* precisely in locatival forms (cf. *ṇdh-ero-* > Skt. *ádhara-* 'lower' ˜ Goth. *undaro* 'under'), I see no reason not to assume directly *kat-ero-* with Benveniste, *hitt. et i.-e.* 102 f. The assumption of *kat-tero-* with loss of anaptyctic *s* between dental stops (*kattera-* for expected *kaztera-*), as per Oettinger, *Stammbild.* 537, is possible, but unnecessary.

[110] For the root etymology and preforms of *tamek-* see Excursus XII.

*šiya-* 1× in H), *pé-e-da-/ pé-da-* 'bring' (Mr, Mw, H, TS) and *pē* alone (Mr, H, TS). We also continue to find *e* in the reduplicating syllable of *mema-* (all), *memal-* (Mw) and *wewakk(i)-* (Mr).

### 4.1.2. Neo-Hittite *e* < PIE *$*eh_1$*

We find *i-e-et* 'made' once in Mursili II. Elsewhere the *ya-* form has been generalized. The verb *te-* 'say' is attested once (H). We also find the compounds *peḫute-* (S, Mr, H, TS), *uwate-* (Mr, H, TS) and *wete-* (Mr, H). If Oettinger's derivation, *Stammbild.* 127, of *werite-* 'be afraid' < *$*weri dheh_1$*- 'zur Verehrung setzen' is correct, then we also have *$*-eh_1$*- in the derived noun *weritema-* 'fear' (H). The inchoatives in *-ešš-* < *$*-eh_1s$*- are also spelled *-ešš-* at all periods of Neo-Hittite, but there are also more than a few examples of *-išš-*. On the source of this variation and that of *ganešš-/ganišš-* 'know' see below 4.2.7. According to Watkins, *TPS* (1971) 75–78, LUGAL-*uēzna-* 'kingship' (Mr, also ambiguous LUGAL-*u-IZ-na-* in H, TS) is based on a stative verb *ḫaššue-* 'be kind' < *$*-eh_1$*-, and likewise *wantema-* 'heat' (TS) and reduplicated *wantewantema-* 'lightning' (Mw) on a *$*wante-$* 'be warm'.[111] The uncertain examples *ēp-* 'take, hold' and *lē* (prohibitive negative) are both attested with *e* throughout Neo-Hittite.

### 4.1.3. Neo-Hittite *e* < PIE *$*ē$*

The Old and Middle Hittite examples *ēsḫar* (Mr, Mw), *ēd-/ēz-* (S, Mr), *eš-* 'sit', *mēḫur, wēḫ-* and *wēk-* (all Mr, Mw, H, TS) are all attested consistently with *e* in Neo-Hittite.

### 4.1.4. Neo-Hittite *e* < PIE *$*Vi/Vh_1i$*

With a single exception, Hittite *e* < *$*V(h_1)i$* remains consistently *e* throughout Neo-Hittite until the period of Tuthaliya IV-Suppiluliuma II, where an incipient merger with *i* appears. Examples of *$*e(h_1)i$*: *eḫu* (Mr, H, TS), *ḫantezzi-* (now an *i*-stem!) (Mr, Mw, H, TS), *we-* 'come' (throughout, however, only with the ambiguous spellings *ú-IZ-/ ú-IT*), *ḫeu-* (plus derivatives) (Mr, H). The verb *ne(ya)-* shows consist-

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[111] Watkins compares the formation of Hitt. LUGAL-*wēzzi-* (the OH base of NH LUGAL-*wēzna-*) with that of Goth. *faheþs* 'joy', both from *$*-eh_1-ti$*-. Neither *ḫaššwe-* or *$*wante-$* are assured as stative verbs. For the former, one could also assume a *$*-ye-/-yo$*-denominative *$*ḫaššu-ye$*- with Oettinger, *Stammbild.* 339 f., while the verb 'be warm' is directly attested only as *wantā(i)-*. The latter could easily reflect an earlier stative *$*wante-$* (cf. later *ḫuišwā(i)-* for *ḫuišwe-*), but obviously it could also be an original *-ā(i)-* denominative.

ent *e* from Mursili'through Hattusili III, then *niya-* in Tuthaliya IV/ Suppiluliuma II. We also find *te-(ḫḫi)* < *\*dheh₁i-* (all).

Examples for *\*oi*: the pronominal anim. nom. pl. appears as *e* in *kē* (S) and *apē* (Mr), the nt. nom.-acc. pl. as *e* in *kē* and *kue* at all periods, in *apē* (Mr, H) and *n-e* (S, TS). However, we also find nt. nom.-acc. pl. *kī* in Muwattalli and Tuthaliya IV/Suppiluliuma II and *n-i* in the latter.[112] The oblique stem *\*-oi-* appears as *e* in *šumenzan* (S), and in stems in *-ed-* at all periods: *ammēd-, apēd-/apId-, ed-, kēd-, kued-, tamēd-, tued-, 1-ed-*. Likewise we find throughout ablative *-ēz* in *kēz/ kIz, apēz/apIz, edIz/etez, kuēz*. Only in texts of Tuthaliya IV/Suppiluliuma II do we also find the unambiguous *i*-spelling *ki-i-da-*.

The sequence *\*ai* is represented by ᴺᴬ⁴*ḫekur* 'rock outcropping, crag' (H, TS) < *\*h₂éik-wr̥* [haik-wr̥][113] and by the ambiguous *pī-(ḫḫi)* 'give' (thus at all periods).

The noun *utnē* 'land' reflecting *\*-ēi* is spelled KUR-*e* throughout Neo-Hittite. For iteratives in *-eške-* to stems in *-āi-* see 4.2.7.

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[112] In late Neo-Hittite, the nt. form in *-e/-i* survives only in the fixed collocation *n-e-tta* (*ANA MAMIT* GAM GAR-*ru*) 'May it/they be placed under an oath for you'. The reference is indifferently singular or plural. That is, just as *-at* is singular and plural elsewhere, so is *-e/-i* in the form *n-e-tta* which is preserved to avoid the disfavored *n-at-ta*. See Lee, *ArOr* 34 (1966) 22, note 29.

[113] The noun ᴺᴬ⁴*ḫekur* 'rock outcropping, crag' requires a detailed discussion. Eichner, *MSS* 31.71, with no oblique examples available to him, accepts Friedrich's designation of the word as neuter, and derives it from *\*h₂ék-wr̥, \*h₂ék-wn̥-s* with the same inflection as *mēḫur, mēḫunaš* 'time'. However, the acc. pl. is now attested as *ḫekuruš* (*KBo* XVII 62 IV 4), which points both to an *r*-stem and to animate gender. A review of other attestations confirms that there is no good evidence for a neuter, but clear signs of an animate noun. In *KBo* XIII 101 Rs 18 *allandan* ᴺᴬ⁴*ḫekur* is most easily taken as adjective + noun, as is []-*in* ᴺᴬ⁴*ḫekur* in *KBo* XVII 63 IV 2. The issue is sealed by *KBo* XII 38 IV 3: *kūn* ᴺᴬ⁴*ḫekur*. The nom. sg. *ḫekur* is also animate, as shown by *KUB* XII 63 Vs 35: Z[I]-*ŠU uwattantiš* ᴺᴬ⁴*ḫekur eššari-ššit wielkuwa[n]* 'His soul is a *u.* crag, his body/figure is grass'. The sense of the adjective *uwattantiš* is uncertain, but the context suggests connection with *wattaru-* 'spring' or Luvian *wattan-* 'water': 'a crag having a spring'. In any case, an animate reading for *ḫekur* is required. None of the above texts is earlier than Middle Hittite, but in the absence of any good evidence for a neuter there is no basis for regarding the animate gender or *r*-stem as secondary.

The animate gender and *r*-stem inflection remove any independent basis for a lengthened-grade of the root. Reconstruction of the ablaut pattern of anima *r*-stems is problematic (cf. the discussion of 'hand' in note 64), but we may just as well assume a root *\*h₂eik-* as *\*h₂ēk-*. Hitt. *ḫekur* 'crag' would thus be related to Grk. *aikhmḗ* 'spear-point', etc. Eichner's examples in Hittite for lenition of voiceless stops after a diphthong are dubious, but Pal. *kītar* 'lies' and Luv. *lūtanza* 'windows' suggest that the rule did originally apply here (Hitt. *ki-tta* and *luttāi* with *-tt-* may be analogically restored). The assumption of an original diphthong *\*ei* accounts for the attested *e* in *ḫekur*, while we have seen evidence that *\*ē* becomes Hitt. *i* after *\*h₂* (2.2.9 etc.).

The appearance of *i* for *e* in *niya*- and nt. nom.-acc. pl. *kī* beside *kē* could be explained as analogical. The *\*e* vocalism of *neya*- was unique beside other stems in *-iya*- and could have been finally leveled after them. The use of *kī* for nt. nom.-acc. plural could also be viewed as merely the use of neuter singular for plural as elsewhere in Hittite: cf. the near-complete replacement of enclitic *-e* by *-at*. This in fact seems to be the correct explanation of the isolated nt. nom.-acc. pl. *kī* in Muwattalli (unless we are dealing with unrecognized later copies!). However, the appearance of *ki-i-da-* /kida-/ beside *ke-e-da-* /kẹda-/ in the oblique stem is not explainable by analogy, since there is no model for this replacement. Likewise, *n-i* for *n-e* in the fixed formula *n-e-tta* can hardly be analogical. Nor can it be a coincidence that these *i* forms appear at the same time as *niya*- for *neya*-. I therefore take the appearance of *i* for *e* (i. e., /ẹ/ < *$V(h_1)i$) in late Neo-Hittite to reflect a phonological merger in progress. We have already seen other evidence that the *e* < *$Vi$ is a high 'close' *ẹ* which tends to be raised to *i*: cf. 2.2.5 and 2.3. That some words with *ẹ* are attested thus far only with *e*-spellings in texts of Tuthaliya IV/Suppiluliuma II is hardly surprising, given the very restricted corpus.

## 4.1.5. Neo-Hittite *e* by Anaptyxis
The verb *teripp-* 'plow' (see 3.1.5) is also attested in Neo-Hittite (H).

## 4.1.6. Other Examples of Consistent *e* in Neo-Hittite
Several examples from the older language recur in Neo-Hittite: gen. sg. *-el*, *ḫamešḫant-*, *genzu-*, *ēzzan-* / *Izzan-*, *wete-* / *weda-* 'build'. Apart from proper names, I may cite also *šenaḫḫa* 'ambush' (?), *šešḫa-* 'arrange', *tekri-* '?' (all Mr), *šeknu-* 'robe' (H, TS), *wera-* (a container) (TS), *tešḫa-* 'dream' (Mr, Mw, H; but *tišḫa-* in TS, pointing to *$Vi$??). On words with consistent *i* in Old and Middle Hittite which appear with consistent *e* in later Neo-Hittite see below 4.4.2.

## 4.2. Consistent *i* in Neo-Hittite

## 4.2.1. Neo-Hittite *i* < PIE *\*i*
### 4.2.1.1. Examples of *i* < *\*i* in Root Syllables
Several examples from Old and Middle Hittite are attested in Neo-Hittite, still with consistent *i*: *ḫuinu-* (Mr, H), *imma(kku)* (Mr, H, TS), *īt* (Mr, Mw, TS), *iwar* (Mr, Mw, H), *iškiš-* (Mr, H, TS), *nini(n)k-* (Mr,

Mw, H), *zinna-* (Mr, Mw, H). The last example is also attested as *zi-en-na-* in one manuscript, *KUB* I 1 + I 60. IV 47 (H).

### 4.2.1.2. Examples of *i* < *\*i* in Suffixes

Besides the interrogative *kui-* and indefinite *kuiški,* only a few common *i*-stem adjectives such as *šalli-* 'great' and *nakki-* 'weighty, important' are attested throughout Neo-Hittite. Altogether, however, including proper names, over seventy different *i*-stems are attested, with the total relevant examples (chiefly nom. and acc. sg.) numbering well over a hundred. Out of these I have counted only six spellings in *-eš* (anim. nom. sg.) and one in *-en* (anim. acc. sg.). Five of these seven examples are proper names. In view of the overall consistent distinction of *i* and *e* in Neo-Hittite, in particular the perfect consistency of dat.-loc. singular *-i* and instrumental *-it* (which have *i* in a similar environment), these few exceptions must be taken as aberrant, if not simply erroneous. They hardly constitute evidence for a general merger of *e* and *i* in Neo-Hittite.

### 4.2.1.3. Examples of *i* < *\*i* in Endings

The deictic pronoun *eni/ini* has consistently *i* as its second vowel in Neo-Hittite, as does nt. nom.-acc. sg. *kī* 'this' and the corresponding adverb *ki-ššan* 'thus' and adjective *kiššuwant-* 'of this sort' (but see 4.3 below on *eni-ššan* and *apēnissan!*).

As indicated earlier (note 1), the instrumental case is a moribund category in Neo-Hittite, surviving only in fixed collocations. There are a few examples, however, from throughout the period, and they continue to show *i* vocalism, including some unambiguous spellings: *ḫa-aš-ti-(i)-it* (*KUB* XIX 37 II 6, *KUB* XXXI 10 I 4; Mr), *āššawīt* (*KBo* XI 1 Vs 39. Rs 18; Mw), *tar-aḫ-ḫa-an-ti-it* (*KUB* XXI 29 I 15), *[šek]kantit* (*KUB* XXI 37 Vs 52) (both H). The spelling *še-ek-kán-te-et* in *KUB* XXVI 12 II 15 (TS) is only an apparent exception, since we are dealing again with the use of *TE* for /ti/ (see 3.3 above).

The dative-locative singular is also spelled consistently with *i,* including unambiguous plene spellings from all periods. The spelling *ḫu-u-ma-an-te-(ya)* (*KBo* XII 38 I 7; TS) is simply another example of the use of *TE* for /ti/.[114] The phrase *PÍ-di-eš-ši* 'in his place' (*KBo* XII 38 I 7, IV 14 II 60) for correct *pé-(e)-di-iš-ši* (Mursili passim) and *ištarni-*

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[114] The same holds for *kat-kat-te-nu-* (1× in H) for /katkatinu-/, causative to *kat-katt(i)ya-* 'tremble' with syncope of *-ya-* to *-i-,* and for *ḫa-an-te-ya-at* (TS) to *ḫantiya-* 'show special favor', probably from *ḫantī* 'separately' > 'especially'.

*šum-me* 'among them' (*KUB* XXVI 50 Vs 9) for correct *ištarni-šum-mi* (*KBo* XIV 12 IV 31 ff; Mr) involve enclitic possessives, the use of which is no longer understood in Neo-Hittite: see 4.4.1.

The second singular imperative ending *-i* is attested in *dāli* (*KBo* XXII 40 Rs 42; S), *uppi* (*KBo* V 4 Vs 12 etc.), *kueni* (*KBo* XIV 1 II 5) and *kuenni* (*KBo* III 4 I 26) (all Mr), *paḫši* and *ūnni* (*KUB* XXI 1 I 69 ff and II 69 respectively; Mw) and again *uppi* (*KUB* XXIII 1 IV 19; TS). To these we may add the Middle Hittite forms *eši, uppi* and *kueni* from *KUB* XIV 1 Vs 19. 39. Rs 26 respectively, and with caution *tarni* in *KBo* IV 3 III 29 (late copy of a text of Mursili II).[115]

Except for the two examples from stems in *-š-*, all the other verbs listed above belong to the class of verbs in Neo-Hittite with stem-final *-i-*: cf. pret. 3rd sg. *dališta, kuenništa, tarništa, unništa, uppišta* (all of these may also be spelled secondarily with *e:* see 4.2.7). Originally, of course, *kuen-* is a root-present, and *tarna-* a stem in $*-neh_2-$, but other forms of the paradigm show that they have been assimilated to the durative type in *-anna-/-anni-*: besides the pret. 3rd singulars listed above compare also the pret. 3rd plurals *tar-ni-IR* and *ku-e-ni-IR* in Middle Hittite (note 107). All this suggests that the second singular imperative in *-i* is simply the bare stem of this class: *unni,* etc. after *(i)yanni* 'march!' $< *ye-nh_2i$. Whether this is also the source of the imperatives *eši* and *paḫši* is uncertain, but it seems likely. The imperative *eši* 'occupy!' with an active ending and transitive meaning is certainly non-original from the middle verb *eš-* 'sit', while for the root-present *paḫš-* 'protect' we would expect *\*paḫḫiš* like *akkiš* (2.2.7) with anaptyxis from endingless *\*paḫš.*

### 4.2.1.4. Examples of *i* < *\*i* in Prefixes

Verbs with *i*-reduplication in Old and Middle Hittite also show mostly *i* vocalism in Neo-Hittite, but there are indications of a change to *e* in some forms: *išḫiya-* (Mr, H, TS), *išḫuwa-* (Mr, H, TS), and *tit(ta)nu-* (S, Mr, H, TS) all preserve *i* throughout. However, *titḫa-* 'thunder' appears already as *tetḫa-* in texts of Mursili and Muwattalli, while *mimma-* 'refuse' (S, Mr) shows up as *memma-* in the Tawagalawa Letter (*KUB* XIV 3 passim) and *KUB* XXVI 70 Vs 5, a letter mentioning Urhi-Tesub and Tukulti-Ninurta. These two texts, not taken into our corpus proper because they cannot be assigned to a specific ruler, are

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[115] The hapax *[ḫ]anneššar ḫanne* in *KUB* XIX 14 IV 6 (Mr) is no evidence for *e* vocalism, since the *e* spelling of the verb may be conditioned by the immediately preceding noun: *ḫanne-ššar → ḫanne.*

on various grounds clearly from the later period of Neo-Hittite. Similarly, *wida-* 'bring' (Mr) becomes *weda-* (H). The three examples *titḫa-/tetḫa-*, *mimma-/memma-* and *wida-/weda-* will be discussed further in 4.4.2. The verb *pippa-* continues to be spelled *PÍ-IP-pa-* (H, TS), but this spelling is of course ambiguous.

### 4.2.2. NH *i* < PIE *$*iḫ_1$

Texts of Suppiluliuma I and Mursili II still show examples of the old weak stem *ḫalzi-* 'call' versus the later analogical *ḫalz(i)ya-* after the -*ya-* stems (cf. note 94). The verb *minu-* 'pacify, soothe' reflects *$*miḫ_1$-*néu-*. The iterative *išša-* 'make, do' still appears with *i* vocalism in Suppiluliuma I, but thereafter consistently as *ešša-* (the single exception in *KUB* XIV 13 + I 35 (Mr) is in a prayer and therefore suspect). For *išša-* > *ešša-* compare the iteratives in 4.2.1.4 above and see 4.4.2.

### 4.2.3. NH *i* < PIE *$*ī$

The deictic pronoun *aši* continues to be spelled *a-ši* throughout Neo-Hittite (cf. also the derived *aši-want-* 'poor'). The corresponding form *uni* is also attested (Mr, TS). The adjective *mašiwant-* 'as/how much' (see 3.2.3) also occurs (S, H).

### 4.2.4. NH *i* < Syncope of *ye*/*ya*

Aside from iteratives of -*ye-*/-*ya-* stems (see 4.2.7), the only really solid example is the adverb *SIG₅-in* /latsin/ (Mr) < /latsyan/: see 3.2.4. The abstract *laḫlaḫḫima-* 'anxiety' (Mr) may be derived from the verb *laḫlaḫḫ(i)ya-* 'be agitated' by syncope.[116] One could also interpret the 'broken' reduplication of *ḫaliḫl(i)ya-* 'bow' (Mr) as resulting from the syncopation of a full reduplicated stem *ḫalya-ḫalya-*.

### 4.2.5. NH *i* < PIE *$*ei$

The Old Hittite examples *ki-*, *kiš-* and *kinun* are well attested throughout Neo-Hittite. The spellings with *KI* are of course ambiguous, but the utter lack of any plene spellings with *e* in these very common words argues for *i* vocalism.

Another likely example is *gImmant-* 'winter' and its derivative *gImmandariya-* 'spend the winter' (Mr), based on *$*ĝheimn$-*, oblique stem to

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[116] The *i* of the abstract *tetḫima-* 'thunder' (Mw) must be analogical, since the base is *tetḫ(a)-*. It is unclear whether the *i* is original *i* after forms like *laḫlaḫḫima-* or *$*ē$ < *$*eh_1$ after the type of *weritema-* (4.1.2). For *$*ē$ to *i* after *$*h_2$ see 2.2.9.

the *n*-stem *\*giman-* 'winter' seen in *gImaniya-* 'spend the winter' (thus far attested only in NH copies of OH texts). Hitt. *\*giman-* would equal Grk. *khéima* < *\*ĝhéimn̥*. For *-mm-* < *\*-mn-* compare *mimma-* < *\*mi-mn-* and see notes 90 and 110. Since all the attested forms are secondary derivatives, it is admittedly difficult to exclude a zero-grade base *\*ĝhimn-,* which would also lead to *gimm-.* Once again, the complete lack of any spelling *ge-e-em-* (anywhere in Hittite) strongly suggests *i* vocalism. On *gi-e-mi* (single *m!*) see note 90.

### 4.2.6. NH *i* < PIE *\*ĕ*

### 4.2.6.1. Examples of *i* < *\*ĕ* + Nasal

The OH examples *manninkuwan* (S, Mr, H, TS) and *innara-* (H, TS; in derivatives) are both attested in Neo-Hittite. We also find the MH example *immiya-,* although its value is diminished by the aberrant spelling *im-me-a-* (*KUB* XXI 5 III 15; Mw): cf. for the latter perhaps MH *pIt-te-(y)a-* for /pittya-/ in 3.3. As for the verbs in *-i(n)k-,* the forms without nasal are uniformly with *i* vocalism. The nasalized forms are also regularly in *-ink-,* but there are occasional exceptions: *ḫarnink-* (throughout; 1× *-ni-en-* in TS), *link-* (S, Mr, H, TS; 1× *li-en-* in H, 2× in TS), *ninink-* (Mr, Mw, H), *šarnink-* (Mr, H).[117] Compare also *ḫink-* 'offer; bow' (Mr, H; 1× *ḫi-en-*) and *ḫingan-* 'fate' (Mr, H, TS). The lack of any *e* spellings in the non-nasal forms (never *\*ḫar-ne-ek-,* etc.) and of any *-Ce-en-* spellings in the nasal forms (never *\*ḫar-ne-en-* or *\*ḫé-en-*) suggests that the occasional spelling *-Ci-en-* also stands for /Cin/. Whether these instances are errors or reflect a systematic use of *EN* for /in/ (cf. *TE* for /ti/ above) is not clear.

### 4.2.6.2. NH *i* < Unaccented *ĕ*

The OH examples *nepiš-* (S, Mr, Mw, H) and *idālu-* (S, Mr, Mw, H) continue to be spelled with *i,* as do the more problematic *daganzipa-* (Mr) and *ḫuišnu-* (S, Mr). The causative *kišt(a)nu-* 'extinguish' (Mr) may well continue *\*Kest-néu-* (cf. *kištanziya-* and *kištuant-*). The verb *teripp-* 'plow' is also attested (H): see 3.1.5.

### 4.2.7. NH *i* by Anaptyxis

As already described above (3.2.7), the OH rules for anaptyctic *i* and for secondary *e* from *āi* appear to have been lost in Middle Hittite,

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[117] The example *šar-ni-en-ki-iš-ki-mi* in *KUB* XIV 14+ Rs 14 (vs. *šar-ni-in-*° ibid. Rs 8) is not probative, since this manuscript of a prayer shows at least two indubitably unreal *e* spellings: the unique *ku-e-iš-ki* in Rs 18 for pan-Hittite *ku-iš-ki* and *ú-e-ya-at-ten* in Rs 36 for spoken /uya-/, elsewhere written *u-(i)-ya-.*

leading to fluctuation between *e* and *i* in certain verbal forms, namely iteratives to stems in final guttural or labial, and those forms of stems like *takš-* where the ending began with *-t-*. This produced doublets such as *šarninkiške-/šarninkeške-* and *takkišta/takkešta*.

What we find in Neo-Hittite is a progressive spread of this fluctuation in all such sequences. That is, iteratives to verb stems in *-i-* or *-ya-*, which had previously been only *-iške-* (see 3.2.1.1 and 3.2.4), now also show both *-iške-* and *-eške-*. The few examples in Suppiluliuma I show no alternation, but doublets in Mursili II are attested in all types:

| Stems with Anaptyxis | Stems in *-i-* |
|---|---|
| *parḫiške-/parḫeške-* | *piške-/peške-* |
| *šanḫiške-/šanḫeške-* | GUL-*anniške-*/GUL-*anneške-* |
| *kururiyaḫḫiške-/°-ḫḫeške-* | *pīyanniške-* vs. *ḫeyawaneške-* |
| *maniyaḫḫiške-/°-ḫḫeške-* | |

| Stems in *-āi-* | Stems in *-ya-* |
|---|---|
| *ḫatreške-* vs. *luluwiške-* | *walliške-/walleške-* |
| *arkuwēške-* vs. *mukiške-* | *arriške-/arreške-* |
| *ašandulēške-/ašanduliške-* | *zaḫḫiške-* vs. *laḫḫeške-* |

Likewise, the doubly characterized iterative to *šeške-* 'sleep' appears as both *šeškeške-* and *šeškiške-*.

Data from later rulers shows the same situation. From Muwattalli I may cite *parḫiške-/parḫeške-* < *parḫ-*, *piške-/peške-* < *pi-*, *arkuwiške-/arkuwēške-* < *arkuwā(i)-* and *naḫšariške-* vs. *laḫḫeške-* (*ya*-stems). From Hattusili III note *parḫiške-/parḫeške-*, *piške-/peške-*, *tiške-/teške-* < *tiya-*, *ḫatreške-/ḫatriške-* < *ḫatrā(i)-*. The texts of Tuthaliya IV/Suppiluliuma II show *šanḫiške-* vs. *maniyaḫḫeške-* and *memiške-/memeške-* < *memi-*, as well as *waššiške-* < *wašše-* and the double iteratives *uškiške-*, *duškiške-* and *iškiške-*.

In a similar fashion, the alternation *-iš-/-eš-* spreads from the type of *takkiš-/takkeš-* to verb stems in *-ešš-* (notably inchoatives in *-ešš-* and *ganešš-* 'know') and to verb stems in final *-i-*, which have the form *-iš(š)-* before endings beginning with *-t-*.

For verbs in *-ešš-* there are no examples in Suppiuluima I. In texts of Mursili II most inchoatives in *-ešš-* show the etymologically correct *e* spelling, but note the doublets *ḫaddulešš-/ḫaddulišš-*, *dudduwarešš-/dudduwarišš-*, *makkešš-/makkišš-* and *nakkešš-/nakkišš-*. In Muwattalli we find only the non-original *i*-spelling in *k/ganišš-* 'know' but *pankuēšš-*

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in the only inchoative attested. Hattusili III offers both *kaneš̃-* and *ka-niš̃-* (even in a single manuscript: copy A of the 'Apology'). Most inchoatives are in *-eš̃-*, but we do find ZAG-*iš̃-*, ḪUL-*iš̃-* and TUKU.TUKU-*iš̃-*. The very limited corpus of Tuthaliya IV/Suppiluliuma II has only *-eš̃-* in *kaneš̃-* and inchoatives (ten examples), but it must be kept in mind that these represent only five manuscripts.

The *i*/*e* fluctuation seems more widespread in the *-iš-(t)-* forms of stems in *-i-*: we find already *uppeš-* < *uppi-* in Suppiluliuma I as well as *peš-(teni)* < *pi-* and pret. 3rd sg. *šunneš* to *šunna-* 'fill'. The last is analogical after *yanniš*/*yanneš* to *yanna-*/*yanni-* (as already noted several times, the *-i-*, and hence now *-i-*/*-e-*, forms of the *-anna-*/*-anni-* type spread in Middle and Neo-Hittite to other stems in *(C)VRRV-*). The *-iš-*/*-eš-* alternation in *uppi-* and *pi-* continues in texts of Mursili II, where we also find *ūnništa*/*ūnnešta*, *iyanniš*/*iyanneš*,[118] *memišta*/*mem-ešta*, *t*/*dališta*/*talešta* and *šannešta* (analogical after *ūnnešta* etc.). Verbs with anaptyxis in Old Hittite, the starting point for this entire development, naturally also show the *-iš-*/*-eš-* alternation: *takkeš-* (Mr).[119] Iteratives in *-šša-* also show a pret. 3rd sg. in *i*/*ešta*: *iššišta*/*eššešta*,[120] *warreš-šešta*, *ḫalzeššešta* (all Mr).

In Muwattalli we find *peš-(ti)*, but *tarniš-(ta)* and *memiš-*. Of particular interest is the plene spelling *ták-ke-e-eš-zi* (*HT* 8,5), which confirms a genuine anaptyctic vowel. The same plene spelling *takkēš-* is found in texts of Hattusili III. Hattusili offers only *e* vocalism in *peš-* 'give' and *tekkuššeš-(ta)* < *tekkušša-* 'show', and only *i* vocalism in *memiš-*, *warriš-šiš-* and *šunniš-*, but both *i* and *e* in *uppiš-*/*uppeš-* and *penniš-*/*penneš-*. In the limited corpus of Tuthaliya IV/Suppiluliuma II we find *peš-* 'give', but *wareššiš-*.

The doublets in the extensive texts of Mursili II and the random distribution of *i* and *e* forms elsewhere make it clear that we are facing free variation of *i* and *e* in verb stems in *-eš̃-*/*-iš̃-* as well as iteratives in *-eške-*/*-iške-*. The Middle Hittite facts show that this variation is not phonologically conditioned in Neo-Hittite, but is due to analogical

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[118] Mursili also has once *iyannit* after the 'thematic' *mi*-verbs in *CVRRi-*: see 2.4.1. for a detailed discussion.

[119] Since *li(n)k-* is a *mi*-verb, the original pret. 3rd sg. is *li(n)kta*, not *\*link-šta*. The form *linkešta* in *KUB* XIV 14 + I 15 is thus necessarily analogical. Given the manuscript, the authenticity of the form is not beyond question.

[120] To my knowledge, the pret. 3rd sg. of iteratives in *-šša-* is unattested in Old Hittite. Since this type was originally athematic (see note 80), it seems possible that anaptyxis is original here: *\*iš̃-š* or *\*iš̃-šta* > *\*iššiš*/*iššišta*.

spread from a handful of forms which originally had anaptyxis in this environment (3.2.7).

### 4.2.8. Prothetic *i* in Neo-Hittite

Many Old and Middle Hittite examples of prothetic *i* recur in Neo-Hittite, consistently with *i-*: *išpant-* (Mr), *ištamašš-* (Mr, Mw, H), *ištarna* (Mr, TS), *ištark-* (Mr, H), *išḫan-* (Mr, H), *išk(iya)-* (TS), *išpanduzzi-* (Mr, Mw, H), *išpar-* (H), *išpart-* (TS) and *ištapp-* (H). To these may be added *išpāi-* 'be satisfied' < *speh₁i-* (Mr), *iškalla-* 'cut, tear' < *skelhₓ-* (Mr), *išduwa-* 'become known' < *steu-* (Mr), and *ištandā(i)-* 'tarry, delay', built on the participle of *steh₂-*. It was argued above (2.2.8) that the prothetic *i-* in such forms is merely graphic. In this connection it is worth noting that these forms show consistent *i* in Neo-Hittite, although they have virtually the same environment (*\*isCa-*) as *išša-* 'make, do', which becomes *ešša-*. If the *i-* were linguistically real, then we might expect a change to *e-*. The force of this argument is of course weakened by the fact that the precise conditioning for the change in *išša-* > *ešša-* is not yet determinable (see the detailed discussion in 4.4.2).

### 4.2.9. NH *i* < PIE *\*ē*

The conditioned change of *\*ē* to *i* after *\*h₂* is still reflected in Neo-Hittite in preterite third plurals of stems in *-ḫḫ-*, which show consistent *-ḫi-ir* /-hir/ versus the /-ēr/ of other stems (cf. 4.4.1): *kappilaḫḫir* (S), *kūriyaḫḫir*, GUL-*(a)ḫḫir*, *wātarnaḫḫir*, *tar(a)ḫḫir* (all Mr), *[kuru]riaḫḫir* (H), *wātarnaḫḫir*, GEŠPÚ-*aḫḫir* (TS).

Of the other examples offered for this development in Old Hittite, *ḫīla-* 'courtyard' is attested in the derivative *ḫilammar* 'entrance-hall' (H). On the other hand, for OH ᴱ*ḫištā* we find consistently (INA) ᴱ*ḫeštī* with *e* vocalism (Mr, H). On this change see 4.4.2.

### 4.2.10. Other Examples of Consistent NH *i*

Many of the Old and Middle Hittite examples are attested in Neo-Hittite: *-ila* in *apaš-ila*, *alkIšta-* (but see 4.4.2!), *ilaliya-*, *išiyaḫḫ-*, *ḫappIna-*, *nawi*, *šallg-*, *kartimnu-*, *mališku-* and *pIdda-*. To these we may add *annišan* 'formerly', *gImra-* 'field, country', *ḫappIra-* 'city', *Irḫa-* 'boundary', *išḫaššarwatar* '?', *kalmiš(a)na-* 'log', *kanint-* 'thirst', *mišrIwant-* 'splendid', *niwalli-* 'innocent', *nink-* 'get drunk', *taninu-* 'pacify', *ḫuitar* 'wild beasts', *iparwašši-* '?', *dapi(ya)-* 'all'.

## 4.3. Alternating e and i in Neo-Hittite

The occasional appearance of *i* for *e* in the sequences *wet, wed* and *wes* already attested in OH manuscripts recurs in a few forms in Neo-Hittite. The stem of 'water' is spelled with *i* in *widār* (Mr) and *witaz* (H), while *wešiya-* 'pasture' occurs as *wišiyawaš* in *KBo* III 4 III 72 (Mr). Beside the frequent ambiguous spelling *ḫu-IT-ti-ya-* 'pull', which may well represent expected /hwetya-/ as in Old Hittite, we find once the clear *i*-spelling *ḫu-i-it-ti-ya-°* (*KBo* II 5 II 3; Mr). *KBo* V 4 Rs 29 ff (Mr) shows *wi-ú-i-da-a-i, ú-i-wi-ta-a-i* and ambiguous *ú-IZ-za-i* 'urges'. As discussed in detail, *KZ* 93 (1979) 265 ff, this verb indirectly reflects an 'acrostatic' present *wḗdh-ti, *wédh-n̥ti. Thus, while the *i* of the reduplicating syllable may reflect original *i* (cf. 2.2.1.4), the *i* of the root syllable must continue either *ĕ or ē.[121] Since we continue to find *wete/weda-* 'build' with *e*, it is unlikely that the few examples above reflect a generalization of the *i* variants. The lack of *e* spellings may easily be due to chance.

The pronominal genitive plural in *-enzan* is attested in *šumenzan* (S). After Suppiluliuma I, the ending is replaced by *-el*, so we have no further evidence for the alternation *-enC-/-inC-*. The family of *ḫi(n)k-* 'offer' is spelled consistently with *i* in Neo-Hittite (see 4.2.6.1), but as noted above in 3.3, this may be due to analogy with the numerous verbs in *-i(n)k-*.

The deictic pronoun *eni* appears as *ini* (S), *eni/ini* (Mr), and *eni* (Mw, TS). The form *ini*, which first occurs in Middle Hittite (3.4.2), is unexplained.

Also unknown to me is the source of the *i/e* alternation in the adverbs *enišsan* and *apēnišsan*. The restricted corpus of Suppiluliuma I shows only *apIniš[šuwan]* with correct *i*, but Mursili II has both *apēniš-šan/apēnessan* and *enišsan/enessan*, Muwattalli only *apInessuwant-*, Hattusili III *enišsan* but *apInišsan/apēnessuwant-*, and finally Tuthaliya IV/Suppiluliuma II *apInišsuwan/apēnessuwan*. The spellings with *-essan* are too frequent to be dismissed as errors. It is also noteworthy that the corresponding *kišsan* is always spelled with *i* vocalism. It is true, of course, that the latter is often represented in Neo-Hittite by the ambiguous shorthand spelling *kIš-an*, but the complete lack of *ki-eš-ša-an* is still striking. The *i/e* alternation in *enišsan* and *apenišsan* appears to be linguistically real, but its source is obscure: cf. perhaps 4.4.2.

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[121] Compare the *e*-spellings in *KUB* IV 8 Vs 6 and 9: *ú-e-ú-i-[da-i]* and *ú-e-ez-[za]-i*. However, since this manuscript is alsmost certainly a copy of an older text, these spellings are not reliable.

Given the general consistent distinction of *-iš* and *-eš* (e.g. anim. nom. sg. of *i*-stems vs. anim. nom. pl.), the alternation of *e/i* in proper names probably also reflects real variation or uncertainty in their pronunciation. One should recall first of all that of seven *e*-spellings in the anim. nom. sg. of *i*-stems in all of Neo-Hittite, fully five occur in proper names (4.2.1.2). We also find *e/i* alternation in non-final syllables of names: e.g. ᵁᴿᵁ*Iyaḫreššа/Iyaḫrišša* (Mr). One fact which suggests that such alternations may be real is the consistent contrast in two manuscripts of Suppiluliuma II: *KUB* XXVI 43 shows ᵁᴿᵁ*Aneša*, ᵁᴿᵁ*Ḫattena* and ᵐ*Ḫupešnaili-*, while the duplicate XXVI 50 has *Aniša*, *Ḫattina* and *Ḫupišnaili-*. Since these examples involve three different sets of graphemes (*NI/NE* and *IŠ/EŠ* as well as the problematic *TI/TE*), it seems unlikely that the observed *e/i* distinction is merely graphic.[122]

## 4.4. Problematic Cases

### 4.4.1. NH Attestations of OH Examples

We have only one sure NH example of the 'thematic' verbs in *CVRRi-*: *zinnit* (*KBo* V 6 I 6; Mr) with expected *i* vocalism. Note also the analogical form *iyannit* in *KUB* XIX 12 II 2 (Mr). For details see 2.4.1.

The only example of a noun in *-(zz)il* is *šarnikzel* in *KBo* II 6 I 34. III 45 (H).[123] The status of the *e*-spelling based on this single manuscript is impossible to determine.

With the exception of verb stems in *-ḫḫ-* (see 4.2.9), the preterite third plural ending /-ēr/ continues to be spelled with *e* throughout Neo-Hittite. The two examples from Suppiluliuma I involve contractions: *wēr* 'they came' and *pēḫutēr* 'they brought'. However, Mursili II provides plenty of examples from athematic stems showing unambiguous /-er/ < \*-ēre: *e-še-er* 'they were', *a-ú-e-er* 'they saw', *iš-pár-te-er* 'they escaped', *pár-še-er* 'they broke', *war-nu-e-er* 'they burned', *u-nu-e-er* 'they adorned'. Note in particular *me-mi-e-er* 'they spoke' which shows that the more frequent *me-mi-IR* should also be read *me-mi-er* /memyer/. Likewise, unambiguous examples such as *ú-e-mi-i-e-er*, *wa-ar-nu-e-er* and *ar-ša-ni-i-e-er* in Hattusili III show that ambiguous cases such as *me-mi-IR*, *wa-ar-nu-IR* and *i-ya-an-ni-IR* should still be read with *e* vocalism. Hattusili III also provides the unambiguous *ešer*, *auer*

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[122] It is impossible to determine whether the spelling *u-ki-el* 'I myself' (*KUB* XXVI 79 IV 5; Mr) versus regular *-i-la* is significant. See also Excursus XIII.

[123] The example *šar-ni-ik-zi-el* in *KUB* XIV 14 Rs 8.21 is without value: see note 117.

and *šipanter* from athematic stems. Texts of Tuthaliya IV/Suppiluliu-ma II at the end of the Hittite empire still show *wa-aš-te-er* 'they sinned' and also *ḫal-zi-i-e-er* /ḫaltsyér/ 'they called', again confirming *e*-vocalism in stems in final *-i-*: thus ambiguous *me-mi-IR* still must be /memyer/.[124]

The animate nominative plural continues to be spelled with *e* vocalism, and examples with scriptio plena (from *i* and *u*-stems) are not rare: *meqqa-ēš* (S), *ḫaluga-ēš*, *karuwiliēš* /karuwilyēs/, *pargawēš* (Mr), *āššawēš* (Mw), *daluga-ēš*, *[ḫ]ēwēš* (H), *meqqa-ēš*, *āššawēš*, *ḪUL-wēš*, *panqawēš*, *kutru(w)ēš* (TS).

Of four attested exceptions, three are only apparent, being contracted forms of *i*-stems (/is/ < /yēs/): *ÌR.MEŠ-iš* and *warḫuiš* (Mr), and *paḫḫuršiš* (TS). See 3.4.1 with references. The only possible genuine exception in Neo-Hittite historical texts is *ḫanniš* 'grandmothers' in *KUB* XXI 19 II 2' (H). The context is broken, and the text is a prayer, so neither the meaning nor authenticity of the form is assured.

## 4.4.2. Problematic Cases in Neo-Hittite

As already pointed out above, several words which have consistent *i* in Old and Middle Hittite change to *e* in early Neo-Hittite. The iterative *išša-* 'make, do' (S) becomes *ešša-* in texts of Mursili and remains so thereafter. The ᴱ*ḫištā* of Old Hittite appears as *ᴱḫeštā* (dat.-loc. sg. *ḫeštī*) in Neo-Hittite (Mr, H). The reduplicated present *titḫa-* 'thunder' (and derivatives) is spelled *tetḫa-* (Mr, Mw), and *mimma-* 'refuse', still with *i* in Suppiluliuma I and Mursili, appears as *memma-* in later texts (see 4.2.1.4).

Several more examples can probably be added to this list. MH *dammišḫa-* 'harm' occurs in a text of Mursili as *dammešḫa-*. The verb *tiššā(i)-* 'mobilize' is probably a borrowing from Luvian, as per Oettinger, *Stammbild.* 382. This requires original *i*, but the spelling in texts of Tuthaliya IV/Suppiluliuma II is *teššā(i)-*.[125] The verb *widā(i)-* 'bring' is attested with *i* in Mursili, but with *e* in Hattusili III.

Since the *e* spellings are in each word consistently later than those with *i*, we appear to have a genuine sound change, which took place

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[124] The only genuine exception to pret. 3rd pl. in /-er/ in Neo-Hittite (besides *-ḫḫir* in 4.2.9) is *ḫa-a-ši-ir* 'they gave birth' in *KUB* XXI 38 Vs 60 (H).

[125] The verb appearing in Neo-Hittite as *šešḫa-* 'arrange, determine' (Mr) is a 'thematic' *ḫi*-verb, opening the possibility that we have another example of a reduplicating *ḫi*-present with original *i*-reduplication: *ši-sh_x-* (cf. Oettinger, *Stammbild.* 499). The few spellings with *i* in this verb are unfortunately not in assuredly old texts.

during the time of Mursili II (where some forms have *i*, some already *e*). If we look for a conditioning for the change, we notice that all examples have an *a* in the following syllable, suggesting a simple assimilation: *i* is lowered to *e* before a low vowel *a* in the next syllable. Contrast in particular *tetḫa-* and *memma-* with the other *i*-reduplication verbs *tit(ta)nu-* /titnu-/, *išḫ(i)ya-* and *išḫ(u)wa-*, which have either a high vowel or glide in the next syllable and which show no change to *e*. There are, however, several counterexamples to such a formulation: cf. *idālu-* 'evil', *ḫilammar* 'entry-hall', *ḫuitar* 'wild beasts', *imma* 'even', *iwar* 'like, as' and *zinna-*.

If we reexamine the examples for *i* > *e*, it is possible to attribute the *e*-spellings in some of them to other factors. The appearance of *weda-* beside *wida-* 'bring' may be due to confusion with *weta-/wita-* 'build' (see 2.3 above). We know that the inflection of the two verbs fell together in Neo-Hittite: see Oettinger, *Stammbild.* 373 f. Likewise, the usage of the *e*-spellings of *memma-* 'refuse' betrays a confusion with *mema-* 'speak'.[126]

With these two words removed, the remaining cases of *i* > *e* before following *a* all involve obstruent clusters: *išša-, ḫištā-, titḫa-, dammišḫa-, tišša-* (maybe *šišḫa-*). There remain problems even with this restricted environment. Recall that *kiššan* remains *kiššan* with *i*, while *eniššan* and *apēniššan* show a fluctuation between *e* and *i*. In order to uphold a phonological change *i* > *e* before obstruent cluster plus *a*, one would have to assume that the *i*-spellings in the adverbs in -*iššan* were analogical after the corresponding base forms *ki* and *eni*. In view of the li-

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[126] In both the Tawagalawa Letter and *KUB* XXVI 70, as well as in other Neo-Hittite examples, the stem *memma-* is attested in the collocation -*za* ... *ŪL memma-*. It is clear from the contexts that the meaning is not 'does not refuse'. For this reason, as well as the *e*-spelling, Sommer, *AU* 39–41, and Friedrich, *HW* 140, assign these forms to *mema-* 'speak', interpreting -*za ŪL memma-* as 'say "No!"'.

However, it cannot be coincidence that just in these examples we find pret. 3rd sg. *memmaš* versus *memi/ešta* 'said'. Furthermore, the presence of -*za* with correct *mimma-* in Old and Middle Hittite confirms that the verb in NH -*za memma-* is *mimma-* 'refuse'. The source of the confusion is found in examples like *KBo* XVI 59 Rs 4 (MH ms.): *nu-za ŪL mimmiwen*. Despite the partially broken context, the meaning is surely 'we refused', just as in the NH examples. Since the verb is clearly *mimma-*, the attested structure must have originally been delocutory: 'We refused (with the word/saying): "No!"'. In Neo-Hittite this expression was reanalyzed as 'say "No!"', leading to the *e*-spelling and in some cases simplification of -*mm*- to -*m*-: *memai/memaš* beside *memmai/memmaš*. Obviously, such confusion would have been even easier if *mimma-* were already phonologically *memma-*, but such an assumption hardly seems necessary.

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mited number of examples for the change, such an assumption seems hazardous at present.[127]

Obviously, more relevant examples are needed to clarify the situation. We can affirm at least the following: first, the consistency of the *e*-spellings once they appear argues for a genuine sound change. Second, the presence of an *a* in the next syllable in all examples points to a vowel assimilation comparable to '*a*-mutation' in West Germanic. Details of the conditioning remain uncertain. Note in conclusion that the tentative removal of *wida-* and *mimma-* would permit the change to be dated between Suppiluliuma I and Mursili II, since the latter already has *e* in the rest of the examples.

## 5. Conclusion

By carefully limiting our corpus as far as possible to original texts from each period, we have been able to show that the relationship of *e* and *i* is basically consistent, and that most variation which does exist is systematic. However, the severely restricted corpus has also had the inevitable unhappy result of limiting the number of examples of some phenomena to a mere handful and of excluding some crucial forms. Furthermore, it is probable that despite our best efforts the corpus used contains a few copies and thus some unreal spellings. Therefore it is likely that some of the phenomena dismissed here as aberrations may turn out to be minor conditioned changes, while some of the conditioned changes proposed may prove illusory. Nevertheless, certain broad conclusions seem assured:

(1) The vowels /e/ and /i/ are phonemically distinct at all stages of Hittite. Any mergers or free variation between the two are conditioned.

(2) Several conditioned changes (2.2.5 and 2.3) and an unconditioned merger with /i/ in late Neo-Hittite (4.1.4) strongly suggest that the Hittite result of $*V(h_1)i$ is a close /ẹ/ phonemically distinct from /e/.

(3) It is likely, but not provable from the orthography, that each of the phonemes /e/, /i/ and /ẹ/ had a corresponding long counterpart /ē/, /ī/ and /ẹ̄/.[128]

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[127] The ambiguous spelling *al-KIŠ-ta-nu-u[š]* in *ABoT* 56 III 29 is not a solid counterexample to the proposed rule, since one could read /alkestanus/.

[128] For a likely long /ẹ̄/ note *utnē* < *utnḗi* (2.1.4). The best orthographical evidence for a long /ē/ is found in the anim. nom. pl. *-e-eš*, where the scriptio plena cannot be motivated to show either vowel coloring or accent.

(4) Some variation between /e/ and /i/ (and /ẹ/ and /i̧/) is attested at all periods, including Old Hittite (2.3).

(5) Aside from the monophthongization of *Vi to /ẹ/, all pre-Hittite changes involve the raising of e to i: while OH /e/ may represent only *ĕ, *ē, or *eh₁, OH /i/ may reflect not only *ĭ, *ī, or *ih₁, but also (under certain conditions) *ĕ, *ē, and *ei (2.2.5, 2.2.6 and 2.2.9).

(6) When we restrict our Neo-Hittite corpus to authentic Neo-Hittite compositions, virtually all of the free variation between e and i in Neo-Hittite is limited to iteratives in -iške- and -eške- and verb stems in -išš- and -ešš-.The Middle Hittite evidence shows that this variation began in a small group of verbs, some of whose forms were produced in Old Hittite by anaptyxis or the secondary shortening of -āi- to -e-. With the loss of these highly restricted synchronic phonological rules in Middle Hittite, free variation developed in these forms (3.2.7). In Neo-Hittite this free variation of e and i spread analogically to all verb stems of the form -iške-, -eške-, -iš̃š- or -eš̃š- (4.2.7).

# EXCURSUS I

The Hittite noun *warpa-* is attested mostly in the collective plural *warpa* in the expression *warpa dāi-* 'set up an enclosure' > 'encircle' (see especially *KUB* XXXV 133 II 33–34, where *warpa* is resumed by the dat.-loc. pl. *warpaš*). A secondary dat.-loc. sg. is attested once (*KUB* XIII 2 IV 28). The Hittite stem is almost certainly *warpa-*, since a labial stem *warp-* is highly unlikely. Thus Hitt. *warpa-* not only matches the Toch. *o*-stem *warp/werpe* 'enclosure' exactly in meaning (pace Van Windekens, *le tokharien* (1976) 561), but also undoubtedly in formation. If this is the case, the Tocharian points to an *o*-grade *worPo-*.

The Hittite noun is the base for a verb *(anda) warpā(i)-* 'enclose'. For the meaning and derivation see my dissertation 'Ablative and Instrumental in Hittite', Harvard University (1977) 228–229, and independently Weitenberg, *Hethitica* 2 (1977) 47 ff. For the meaning see also Hoffner, *Studies ... Finkelstein* 107, who does not, however, perceive the correct stem formation (*warpzi* in *KUB* VII 1 + II 13 ff must mean 'wash'!).

Since neither Tocharian nor Hittite indicates the quality of the stop, further connections are open to debate. Hoffner's derivation from *werp/b-* 'turn' (Lith. *veřpti* 'spin', OE *wearp* 'warp', etc.) is based on his interpretation of *(anda) warpā(i)-* as specifically 'wind (cord) around'. HLuv. *warpi-* 'temple precinct' < 'enclosure' (see Weitenberg) makes this unlikely. The basic meaning is 'enclose, surround', which is more directly derivable from PIE *wer-* 'enclose' (Skt. *vṛṇóti* 'encloses' etc.). For the labial compare English 'wrap'. It is quite possible, of course, that the roots *wer-* 'turn' and *wer-* 'enclose' are ultimately the same: note the hesitation of Pokorny, who lists the form *werĝh-* under the former (*IEW* 1154), and then cites it as an extension of the latter (*IEW* 1162).

# EXCURSUS II

Hitt. *widā(i)-/wedā(i)-* 'bring' is not yet attested in OH manuscripts, but all MH manuscripts show *i*-vocalism. The late forms with *e* may be attributed to the confusion with *wete-* 'build' (on the latter see Oettin-

ger, *Stammbild.* 373–374). The CLuv. verb *widā(i)-* appears to be cognate based on its inflection: on its meaning see below. Hollifield, apud Watkins, *Flexion und Wortbild.* 373, suggests that *widā(i)-* represents a lengthened-grade iterative *\*wēdhāye/o-* (cf. Lat. *cēlāre, sēdāre*). However, evidence for PIE *\*ē* > Hitt. *i* is dubious, as is the antiquity of the Latin type. Oettinger, *Stammbild.* 374, views *widā(i)-* as a denominative from a noun *\*weda-* (< *\*wedheh₂-*) 'bringing' to *\*wedh-* 'bring'. This accounts well for the inflection: cf. *piddā(i)-* 'furnish, deliver' < *pidda* 'estate' and see 2.2.2. Hitt. *i* from unstressed PIE *\*ĕ* is also possible. However, the short *ĕ* of *\*wedheh₂* cannot account for the *i* of Luv. *widā(i)-*: we would expect rather *\*wadā(i)-* (see Oettinger, *Stammbild.* 535, and note 26).

I therefore propose that the base noun is *\*widā* (< *\*wi-dhh₁-eh₂-*) 'division, distribution' (parallel to Skt. *vi-dhá-* 'idem'). For the development 'distribute' > 'furnish' > 'bring' compare the uses of the Sanskrit compound verb *ví + dhā-*. The more basic meaning of 'divide' is apparently attested in Luvian *widā(i)-* at *KUB* IX 6 III 9–18: *n-uš anda wešuriyanzi n-uš arha duwarnanzi* ˢᴬᴸŠU.GI-*ma kiššan memai kuiš-tar malhaš-šaššanzan* EN-*ya aduwala ānniti a-an* DINGIR.MEŠ-*inza āḫḫa nātatta tatarhandu witpanim-pa-an widāindu a-du(w)-an annān pātanza dū-wandu nu* ˢᴬᴸŠU.GI GI-ḪI.A *ANA* EN SISKUR.SISKUR *ŠAPAL* GÌR.MEŠ-*ŠU dāi*. The words of the Luvian curse clearly parallel the action of the ritual, which consists of three predicates *anda wešuriyanzi* 'they press/crush' (the hollow reeds), *arha duwarnanzi* 'they break apart', and *ŠAPAL* GÌR.MEŠ-*ŠU dāi* 'places under his feet' (in that order!). The Luvian equivalent of the last is evident: *annān pātanza dū-wandu*. Laroche, *DLL* 95, translates *tatarh-* as 'briser' (?), but the position of *tatarhandu* suggests that it equates rather with *anda wešuriyanzi* 'they crush, press', and this accords better with the patent etymology of *tatarh-*, whixh is surely a reduplicated form of the stem seen in Hitt. *tarh-* 'overpower, compel'. That leaves *widāindu* as the equivalent of *arha duwarnanzi* 'they break apart', and I suggest that *widā(i)-* means in fact 'divide'. The hapax *witpani-* is obscure, but syntactically it is in apposition to *-an* 'him' (the malefactor). Whatever its precise meaning, *witpani-* was undoubtedly chosen to form a figura etymologica (false or genuine) with *widā(i)-*: 'divide in pieces' or the like. The suggested derivation from a form with the PIE preverb *\*wi-* 'apart' thus can account for both the *i*-vocalism and the meaning of both the Hittite and Luvian verbs.

There are serious problems with the derivation of CLuv. *a(ya)-* from *$(h_1)$éye-*. First, if loss of intervocalic *$y$ is Common Luvo-Hittite (see Excursus VII), then *$éyeti$, *$éyonti$ would have entered Luvian already as *$éti$, *$anti$. The latter would have led to *$íti$, *$anti$, from which one cannot derive attested *a(ya)-*. One could claim, of course, that loss of intervocalic *$y$ is a later independent change in Luvian. However, given the regular development of *$ě$ in Luvian (see note 26), *$éyeti$, *$éyonti$ would have become Luvian *$ayiti$, *$ayanti$. That is, 'do, make' would have fallen together with denominative verbs in *$áye$, *$áyo$ (see 2.2.2 below). The latter show in Luvian alternating stems in -$\widehat{ai}$- and -$\bar{a}$- (never -*aya*-!). This suggests that the Luvian development here is parallel (if not shared) with the Hittite: loss of intervocalic *$y$ and contraction of $\bar{a}$-$i$ to $\bar{a}i$ and $\bar{a}$-$a$ to $\bar{a}$. In Luvian, unlike Hittite, the allomorphs -$\widehat{ai}$- and -$\bar{a}$- appear to be in free variation throughout the paradigm.

From *$ayiti$, *$ayanti$ we would therefore expect likewise allomorphs *$ai$- and *$\bar{a}$- randomly distributed through the paradigm. Instead we find allomorphs $\widehat{a}$- and $\widehat{a}$ya- (of which the former is limited to the sin-singular) and no trace at all of *$ai$-. Starting from the preforms *$ayiti$, *$ayanti$ (the virtually certain results of *$éyeti$, *$éyonti$), it is very hard to explain: (1) why the sequence *aya* with intervocalic *y* is often preserved in 'do, make', while *$\bar{a}ya$ in the denominative type is always contracted to -$\bar{a}$- (the length of the first vowel is an unlikely conditioning factor; cf. the Hittite in 2.2.2); (2) what the motivation would have been for the total replacement of the allomorph *$ai$- in this one verb; (3) why the allomorph $\widehat{a}$-, the putative result of *$aya$-, never occurs in the plural or participle, the original locus of *$aya$-.

On the other hand, it does seem hard to compare Hitt. *iēzzi* to forms such as Toch. A *ya-* and (with reduplication) Grk. *híēmi* and leave Luvian *a(ya)-* isolated. Let us see what would happen in Luvian to the preforms assumed above for Hittite: *$yéh_1$-$ti$, *$ih_1$-$énti$. The plural is straightforward: this would have regularly become Luvian *$yanti$ (spelled *yanti* or *iyanti*), homophonous with 'they go'. As for the singular, Luv. *aggati-* beside Hitt. *ēkt-* 'snare' argues that the loss of initial *$y$- before *$e$ was Common Luvo-Hittite (see note 26).

Direct evidence for the outcome of tautosyllabic *$eh_1$ in Luvian is lacking, but note that *$dheh_1$- appears as *ta-* in Lycian (3rd sg. *tādi* 'he places' etc.) and as *ca-* in Lydian: see Heubeck, *Lydiaka* (1959) 53f, and Gusmani, *LydWb* (1964) 87–88. One could also cite HLuv. *tanuwa-* 'set, establish', but a full-grade here is hardly assured. Eichner, *MSS*

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31.80, assumes that the *a* of *tădi* is long /ā/, causing 'lenition' of the initial stop of the verbal ending: -*di* vs. regular -*ti*. Since long $*\bar{e}$ appears in Luvian, Lycian and Lydian as *i* (cf. the respective negatives *ni-š̆*, *ni* and *nid*), one would have to assume a sequence $*\check{e}h_1 > *\check{a}h_1 > \bar{a}$. Since the change of $*\check{e}$ to *a* is specifically Luvian, this further supposes that $*h_1$ was preserved here into Pre-Luvian. I know of no evidence for or against this assumption. By this scenario, one may assume independent $*eh_1 > \bar{e}$ in Hittite (*tezzi* = /dētsi/ < $*dhéh_1$-*ti*). On the other hand, nothing in the orthography proves that Hittite has a long /ē/ here (cf. note 66), nor is Eichner's interpretation of the 'lenited' verbal ending assured. Therefore one could alternatively assume Common Anatolian $*dheh_1$-*ti* > $*děti$, and then usual Luvian $*\check{e} > a$.

In either case Luvian *a* (either /ă/ or /ā/) from $*eh_1$ seems likely. Thus Pre-Luvian $*\acute{e}h_1$-*ti* < $*y\acute{e}h_1$-*ti* would lead directly to *ati*, the attested third singular. Note again that all examples of the stem ā́- in CLuv. are precisely in singular forms: pres. 3rd sg. *ati*, pret. 1st sg. *aha*, pret. 3rd sg. *ata*, imv. 3rd sg. *ādu*. As stated above, this distribution is very hard to explain if the stem ā́-results from contraction of *aya-*, which would have been regular only in the plural. One might argue that the plene writing *a-a-* (*ā-*) does point to contraction from *aya-*, since elsewhere *a-a-* is used to indicate the hiatus left by the loss of $*y$: cf. Hitt. *a-a-ri* 'is hot' < $*ayo-ri$. That this is not the function of the plene writing here is shown by the fact that the stem *aya-* (the supposed source of *a-a-*) is itself usually spelled *a-a-ya-* (5 × vs. *a-i-ya-* 2 ×). The scriptio plena here probably marks the accent, as in Hitt. *(natta) āra* '(ne)fas' (barytone) versus *arā-* 'companion' (oxytone).

Given an allomorphy *ati*, $*yanti$, it is not farfetched to assume that this might be leveled by spreading the *a-* of the singular to the plural and participle, producing isosyllabic allomorphs: *a-ti*, *ay-anti*. Compare for this development the Hittite nasal-infix verbs: *har-ni-k-zi*, $*har-n-k-anzi$ (→ *har-ni-n-k-anzi*). Hence the attested *ayanta/aiyanda* and *aiy-ammi-*. The last step would have been 'thematization' by resegmentation of the third plural and participle as *aya-nti* and *aya-mmi-* after the more numerous Luvian stems in -*a*-: hence a stem *aya-* also in the second singulars *āyaši* and *āyaš̆*.

By the new readings of Hawkins-Morpurgo-Neumann, *NAWG* (1973) 44 ff, most examples of HLuv. *a(ya)-* are now to be read as *izi(ya)-*, a stem whose formation is obscure. Oettinger, *Stammbild.* 567, does list pres. 3rd sg. *á-ya-tí-i*, pret. 3rd sg. *á-tà-à* and imv. 3rd sg. *á-ya-tu*, thus with the same alternation as in CLuv. In Lycian the stem is consistently *a-*, but it should be noted that all attested forms thus far are

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singulars: *adi, ade/adē, axā/agā* (Neumann, *Lyk* (1969) 389). If Lydian *i-* means 'do, make' (Gusmani, *LydWb* 128), it would represent the generalized pre-consonantal weak stem *$ih_1$-.

Thus Luvian *a(ya)-* 'do, make', far from being evidence for an old thematic *$éyeti$, actually supports the unambiguous evidence of Hittite *iēzzi* for derivation from *$yéh_1$-ti, a formation which is also supported by Greek and Tocharian A.


## EXCURSUS IV

Whether the change *ye* > *ya* was phonological (dissimilation or 'polarization' of the front *e* to a back *a* after the front glide *y*) or analogical (after the regular *ya* from *$yo$ in the plural) is not entirely clear. Forms such as *šuppiyašni* beside *šuppiešni* and nominative plurals of *i*-stem nouns in *-iyaš* (< *-iyeš?*) suggest that the change is phonological. On the other hand, these forms have other explanations. One also finds *hannašni* beside *hannešni*, the former clearly secondary after the verb *hanna-;* likewise *huitteššar* and *huittiyaššar* from *huitt(iya)-*, where the first form is likely regular and the second analogical after the synchronic verb stem *huittiya-*. In the same fashion *šuppiyašni* could be modeled on *šupppiyant, šuppiyatar, šuppiyahh-,* while *šuppiešni* may be read *šuppešni* (with deletion of the stem vowel of *šuppi-* before the suffix). Similarly, other classes besides the *i-*stems show nominative plurals in *-aš* (their chronological distribution deserves a separate study). Thus nom. pl. *-iyaš* need not be the phonological result of *-iyeš*.

Support for the change of *ye* to *ya* in verbs being analogical is found in the gradual manner in which this change moves through the paradigm. Forms with *ye* are rarest in the first singular, slightly more frequent in the second singular, and most common in the third singular (present and preterite). The third plurals in *-enzi* are themselves analogical after the third singular and are not relevant here: see 1.2.2 below. It is hard to explain this distribution in phonological terms (especially in the second and third singular, where one would have to assume a different conditioning by *-ši/-š* versus *-ti/-t*. On the other hand, given an analogical leveling from the plural, one might well expect the functionally unmarked third persons to be the most resistant (cf. the case of *uwa-* 'come' in 2.2.3). Obviously, this argument is less than compelling, and the question needs further investigation.

I read the Hitt. preverb *pē* as /pĕ/, the *e*-grade corresponding to the *pŏ* found in Slavic, Latin and elsewhere. See Pedersen, *Hitt.* 129, Kronasser, *VLFH* 49, and most recently Fischer, *KZ* 91 (1977) 222 f, who compares Aeol. *prés* beside *prós* 'toward, against'. Since we also find Balto-Slavic *pō-*, and such pairs as *dō* / *dē* 'to, from' (Lat. *dō-nec* 'until', *dē* 'from' etc.), a lengthened-grade *pē* cannot in principle be excluded. However, I wish to deny emphatically Oettinger's assertion that the scriptio plena *pé-e* requires an interpretation /pē/.

Oettinger, *Stammbild.* 233, states explicitly that the plene writing indicates only vowel length, except in the case of *u* (why this exception?!). On the contrary, plene spellings have at least three other functions in Hittite orthography in addition to indicating vowel length: (1) to show *e*-coloring of the vowel with ambiguous *Ce* / *i*- and *-e* / *iC* signs (*pé-e-da-an* beside *pé-da-an* for /pĕdan/ 'place'); (2) to mark the position of the accented syllable (nom.-acc. sg. *te-e-kán* /dégan/ 'earth' vs. gen. sg. *ták-na-a-aš* /dagnás/, loc. sg. *ták-ni-i* /dagní/ etc.); (3) in the case of all monosyllables except sentence-initial conjunctions, to avoid writing a word with only one sign (*da-a* /dă/ 'take!' and *i-it* /íd/ 'go'). It is clear that both (1) and (3) would apply in the case of *pé-e*, even for /pĕ/. I therefore read /pĕ/ with Pedersen and Kronasser, because this accords better with the phonological developments than /pē/.

Oettinger, *Stammbild.* 389–390, following Eichner, *MSS* 31 (1973) 78, derives *pē* from a locative *poi*. By Eichner's own admission, this form, which finds support nowhere else in IE, is invented solely to explain the forms of *pāi-* 'go' and *pāi-* 'give'. However, a preform *poi-ai-h₂ei* 'I give' would lead to *pay-ai-ḫḫai* then *pay-ĕ-ḫḫe* (4.2.2), then with loss of *y* to *pa-ĕ-ḫḫe* and finally to a long diphthong *pāi-ḫḫe* (again 4.2.2). The attested singular stem *pē-* argues decisively for *pai-* < *pĕ-ai-*. The short *ĕ* of /pĕ/ is now confirmed by HLuv. *pasiya-* 'reject' = Hitt. *peššiya-* 'idem', since *ē* > *i* in Luvian.

It should be noted that the attested plural stem *pi-* cannot be regular from any reconstruction assuming the preverb *pē* and must be analogical after other verbs of the class. If one assumes a plural stem *pĕ-ai-* like the singular, one would expect likewise *pē-* before a consonant, while in the third plural *pĕ-ay-anzi* would lead to *payanzi* and eventually *pānzi*. If one assumes quantitative ablaut of the root, which is possible (cf. note 78), then *pĕ-i-* would again lead to *pē-* before a consonant, while the third plural *pĕ-i-anzi* (i. e. *pĕyanzi*) would give *pĕ-anzi* and ultimately *pănzi*. Other reconstructions of the preverb

such as *pē or *poi would likewise lead to *pāi- or *pē- in the plural, not the attested pi-.


## EXCURSUS VI

Watkins, *Indo-European Studies IV* (1981) 265–266 (to appear in *Gedenkschrift H. Kronasser*), asserts an alternate result -ae < *-aya which he finds attested in nt. nom.-acc. pl. *tamāe, palḫae,* and *šuppae.* In view of the well-attested OH spelling -ae- for the diphthong /āi/, *tamāe* may be taken simply as nt. nom.-acc. sg. /d(a)māi/: see 4.2.3. In the examples *pal-ḫa-e-a*<sup>ḪI.A</sup> and <sup>UZU</sup>*šu-up-pa-e-a,* the context calls for an enclitic 'and' (assumed by Watkins for the latter). These cases may therefore better be taken as examples of the OH spelling e-(a) for /ya/ (admitted by Watkins as a possibility). In addition to his examples *āppa-e-a ḫekta* 'and he bows back' (*KBo* XX 10 I 6, OH ms.) and *anda-e-še* (Laws, § 149, OH ms.), note also dat.-loc. pl. *ḫ[a-a-l]i-e-aš* (Laws, § 66, OH ms.), where the value /ya/ for the sign e is unavoidable, and *parna-še-e-a* (Laws, passim) // *parna-še-ya,* where a plene spelling for the vowel of the enclitic *-še* would be hard to justify. The sign e is also attested in the value /ya/ in Boğazköy Akkadian texts: see John W. Durham, 'Studies in Boğazköy Akkadian', Harvard University (1976) 326, note 451 (dissertation, xerox).

We therefore read /palha-ya/ and /suppa-ya/. The neuter plurals are *palḫa* and *šuppa* (as elsewhere) with the usual result -a < *-aya. The renewal of the *i*-stem nt. nom.-acc. pl. *-ī (on which see Watkins) by *-aya must have taken place before loss of intervocalic *y. Later, -a is replaced by -aya just like gen. sg. -aš by -ayaš, etc.

Watkins' other evidence for *-aya > -ae (and for -a(y)e- > -ā-) is not convincing. Third plural *aruwaenzi* is analogical after the unattested third singular *aruwaezzi just like *ienzi* after *iēzzi* and *kappuwenzi* after *kappuwezzi.* The replacement of *tarmaemi* < *-mā-e-mi by *tarmāmi* is not phonological, but analogical after the plural stem *tarmā-* (regular < *-mā-yo-). Compare occasional *pāmi* and *pāši* for *pāimi* and *pāiši* after *pānzi* in the paradigm of 'go'. In view of other ending-less vocatives in Hittite (e. g. *šarku*), the vocative *isḫā* may likewise be simply the bare stem (the scriptio plena runs throughout the paradigm) and is no evidence for a preform *isḫaye.

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The entirely parallel development of the *$\bar{a}ye$/$\bar{a}yo$ verbs to -$\bar{a}i$-/-$\bar{a}$- in Luvian and Hittite (see 2.2.2) and CLuv. *waššanti* 'they clothe, put on' < *$wos\acute{e}yonti$ like Hitt. *waššanzi* (2.2.1) suggest that the loss of inter-vocalic *$y$ is Common Luvo-Hittite. It therefore follows that attested intervocalic $y$ in Luvian must also be secondary. On *a(ya)*- 'make, do' see Excursus III. The $y$ in CLuv. *ḫu(i)ya*- 'run' may be accounted for like that in Hitt. *ḫuya*-. Likewise, CLuv. *mayašši*- is built on a noun stem *$maya$- (Laroche, *DLL* 65) which may be explained like Hitt. *maya*-.

The only other well attested example of intervocalic $y$ in CLuv. is in the family of *kuwaya*- 'be afraid'. This is clearly related to HLuv. REL-$s$- 'idem', which is now to be read as *hwisa*-: see Hawkins, *AnSt* 25 (1975) 119, note 9. The latter has the appearance of an iterative in -$sa$-: cf. HLuv. *pipasa*-, CLuv. *pipišša*- to *piya*- 'give', which is originally an $i$-present of the *ḫi*-conjugation. This suggests a similar origin for *kuwaya*-: pres. 3rd sg. *$k(u)w\bar{a}i$, pres. 3rd pl. *$kuyanti$. This inflection would accord well with the most likely root etymology: *$k^weh_1(i)$- seen in Skt. *cáyati* 'respects', Grk. *tíō* 'revere'. The attested *k(u)waya*- would represent a secondary 'thematization' in -$a$- of *$k(u)w\bar{a}i$.

One point should be mentioned explicitly here. Since the sequence *uwV* resulting from loss of intervocalic *$y$ in Hittite remains (2.1.5 and 2.2.3), the loss of intervocalic *$y$ is necessarily later than the dissimila-tion of old *$uwV$ to *umV* (2.1.4). Therefore, if one assumes that loss of intervocalic *$y$ is Common Luvo-Hittite, then it follows that the dis-similation of *$uwV$ to *umV* is also Common Luvo-Hittite. I must re-peat that direct evidence for the latter in Luvian is thus far slim (cf. note 58).

## EXCURSUS VIII

The same development is likely for *e(y)a(n)*- (an evergreen tree): *$(h_1)eih_1o$- > *ẹ-a*- > *eya*-. See already Eichner, *MSS* 31 (1973) 77, who relates the word to Hitt. *iyatar* 'abundance, fullness'.

The loss of original intervocalic *$y$ in Hittite and the secondary na-ture of attested intervocalic $y$ eliminates the derivation of Hittite encli-tic -$ya$ 'and' from the PIE relative stem *$ye$/$yo$ (Watkins, *Celtica* 6 (1963) 16). Old Hittite -$ya$ is in complementary distribution with -$a$ 'and' which geminates a preceding consonant. The latter has been equated with Luvian -$ḫa$ 'and' by Watkins himself, *Flexion und Wort-*

*bild.* 375, and by Eichner, *Untersuchungen zur Heth. Deklination* (1974). The equation is confirmed by the correspondence of Hitt. *kuišša* and CLuv. *kuišḫa* 'each, every'. We have no way to determine whether the -*ḫ*- of -*ḫa* represents $*h_2$ or $*h_3$. If it is from $*h_2$, then the assimilation to preceding -*s* may be viewed as a special treatment due to enclisis or the preceding word-boundary, since $*h_2$ is normally preserved after *s*: cf. *išḫi(ya)*- 'bind'. Alternatively, since the change $*$-*Vnh₂V*- > -*VnnV*- is regular (see note 91), one could view the result -*ssa (kuišša)* as analogical after -*nna (kuinna)*. However, in view of the ratio of nominal endings with -*s* to those with -*n* (5:2), I find the latter explanation unlikely. With $*h_3$ the assimilation to a preceding *s* could be regular.

We may also account for postvocalic -*ya* starting from the same -*ḫa*. If -*ḫa* contains $*h_2$, the loss here between vowels (vs. usual preservation as -*ḫḫ*-) may be attributed to the enclitic position like the assimilation of -*šḫ*- to -*šš*-. In each case $*h_2$ would be weaker than elsewhere. With $*h_3$ the loss could again be regular. The proposed loss of -*ḫ*- in postvocalic -*ḫa* would have left a hiatus. That it is filled regularly by -*y*- is due to the distribution of the Hittite inflectional endings which end in a vowel. In the verb by far the majority of these end in -*i* (the entire present active, present middles in -*ri* and past middles in -*ti* vs. present middles in -*a* and imperatives in -*u*). In the noun we have dat.-loc. sg. in -*i* and the ablative originally in -*azzi* (plus the nt. nom.-acc. sg. of *i*-stems) vs. the directive and the nt. nom.-acc. pl. in -*a* and the nt. nom.-acc. sg. of *u*-stems in -*u*. The pronominal ending -*e* /ẹ/ (anim. nom. pl. and nt. nom.-acc. pl.) from an *i*-diphthong would also have favored *y* as a hiatus-filler: cf. *ne-a* > *neya* in 2.2.5. Regular developments would have led to variants -*i*-(*y*)*a*, -*e*-(*y*)*a*, -*a*-*a* and -*u*-(*w*)*a* (for an example of the latter see *nūwa* in 2.1.5). In view of its far higher frequency it is hardly surprising that -*ya* became generalized as the postvocalic form of 'and'.


## EXCURSUS IX


Two other alleged cases of $*eu > u$ definitely do not exist. Kronasser, *VLFH* 44, suggests that the hapax *iugaššaš* 'one-year-old' in the Hittite Laws represents the genitive of a neuter *s*-stem comparable to Grk. *zéugos* 'team', etc. This is falsified by the double -*šš*-, which cannot reflect PIE $*s$: see note 64. Moreover, the usual expression in the Laws for 'one-year-old' is *iugaš*, which may in all cases be construed as a genitive sing. (attributive or predicative) of *iuga*- 'yoke': 'of/for the yoke' >

'suitable for yoking' > 'yearling'. A hypostasis to an adjective is possible (cf. Hitt. *tayazzilaš* 'of the theft' > 'thief'), but by no means necessary. The form *iugašša-* may then be reasonably taken as an adjective in *-šša-* equivalent to a genitive (as in Luvian). For such an adjective in a Hittite context compare *maršašša meḫur* 'a time for falsehood/treason' in *KBo* IV 14 II 56: see Laroche, *RHA* 10 (1949) 24.

The ghost of *tuzzi-* 'army; camp' < *teutyo-* 'belonging to the people' (see most recently Eichner apud Hoffmann, *KZ* 82 (1968) 215, n. 11) seems unwilling to die, despite the cogent arguments of Neu, *IF* 76 (1970) 66, and his predecessors. The etymology is still cited with approval by Oettinger, *Stammbild.* 252. I must therefore add one further counterargument, furnished by Oettinger himself, loc. cit: if *tuzzi-* represented a remodeled *tuzziya-* (like *hantezzi-* 'first' < *hantezziya-*; see 3.2.2), then the corresponding denominative verb would have to be *tuzziyahh-*, as shown convincingly by Oettinger for *hantezziyahh-*, etc. Oettinger, *Stammbild.* 355, lists only two denominative verbs in *-ya-* in Hittite from thematic stems, and we have seen that they do not exist (2.2.1). There are no denominative verbs in *-ya-* from synchronic thematic stems in Hittite. The denominative verb *tuzziya-* 'encamp' requires an *i*-stem *tuzzi-*: cf. *urkiya-* 'track down' < *urki-* 'track, trail'. A nominal *tuzziya-* is thereby eliminated.

On the other hand, Carruba's derivation, *StBoT* 2 (1966) 23, of *tuzzi-* 'camp' < *dāi-* 'place' is well-motivated both semantically and formally. For the meaning compare the use of *katta dāi-* (+ dat.) to mean 'besiege' and Lat. *castra pōnere*. The formation is parallel to that of *luzzi-* 'corvée, socage' < *lā(i)-* 'release' (the sense is '(work) which releases one from one's obligation'). In each case, the suffix *-uzzi-* has been added to the base without *-i-*: *dh₁-uti-*, *lh₁-uti-* (likewise Neu). The objection that *tuzzi-* is animate gender while derived Hittite nouns in *-uzzi-* are neuter is false: *išḫuzzi-* 'belt' < *išḫi-* 'bind' and ^GIŠ*intaluzzi-* 'shovel' are animate in a majority of their attestations, and ^NA4*kunkunuzzi-* is overwhelmingly animate. The noun ^KUŠ*annanuzzi-* (part of a harness) is anim. in *KBo* XVII 15 Vs 7 (OH ms.). We would, of course, fully expect the nouns in *-uzzi-* to be animate, since they reflect the PIE verbal noun suffix *-ti-* (for the *-u-* note *annanu-zzi-*). A derivation *tuzzi-* 'camp' < *'that which is placed/pitched' concretized from *'placing/ pitching' is perfectly in order. The fact that *luzzi-* 'corvée' is attested exclusively as a neuter (from OH) is not a counterargument, since its meaning and usage easily permit its being interpreted as a collective.

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# EXCURSUS X

The source of the *āi* of *aiš* 'mouth' is as obscure as the morphology of this ancient noun. I wish to point out here merely the phonological possibilities dictated by the Hittite forms nom.-acc. *aiš*, obl. *išš-*. The nom.-acc. could reflect a lengthened-grade *$*\bar{o}is$, a contraction of *$*\bar{a}$-e* or *$*\bar{a}$-i*, and probably also of *$*\breve{a}$-e* (since *$*\breve{a}$-ẹ* gives *āi*). Only *$*\breve{a}$-i* seems to be excluded by *ḫa-i(n)k-* > *ḫe(n)k-*. Obviously, one could (and undoubtedly would) take *$*\breve{a}$* and *$*\bar{a}$* in these preforms as ultimately PIE *$*\breve{o}$* and *$*\bar{o}$*.

The oblique stem *išš-* with double *-šš-* must reflect either *$*-h_{1/3}s-$* or inherited *$*-s-s-$*. For double *-šš-* < *$*-h_1s-$* cf. the statives in *-ešš-* < *$*-eh_1s-$* or iterative *išš(a)-* 'do, make' < *$*ih_1s(o)-$*; for *-šš-* < *$*-h_3s-$* cf. *pašš-* 'swallow' < *$*peh_3s-$*. The double *-šš-* of *išš-* cannot be derived from PIE single *$*-s-$*: see note 64. The initial *i-* could, of course, reflect PIE *$*i-$*, but a change of unaccented *$*\breve{e}$* to *i* also seems likely for Hittite: cf. *idālu-* vs. Luv. *adduwali-* 'evil', which can only reflect original *$*\breve{e}$* (see 3.1.2 with refs.). Thus for the oblique stem we are left with *$*e/ih_{1/3}s^\llcorner$* or *$*e/is-s^\llcorner$*. Reconstruction of the original paradigm of 'mouth' depends on one's views on the fate of *$*h_3$* in Hittite and on one's conception of PIE ablaut types. I forgo any further speculation here.

# EXCURSUS XI

Oettinger's derivation of *ḫamank-/ḫamink-* from a nasal-infix present to *$*h_2emĝh-$* (= *$*anĝh-$* 'constrict, narrow') is both formally and semantically unsatisfactory. Since the athematic *ḫi-*conjugation is an archaic category undergoing renewal within the history of Hittite (see Oettinger, ibid. 399), his explanation of pres. 3rd sg. *ḫamanki* as secondary is not credible, particularly since he cannot motivate the different development of *ḫamank-* from the supposedly parallel *tamek-* (on which see Excursus XII). Starting from his reconstructed nasal-infix forms *$*h_2ṃ-né-ĝh-ti$*, *$*h_2ṃ-n-ĝh-énti$*, we would expect regularly Hittite *$*ḫammekzi$*, *$*ḫamanganzi$* (pace Oettinger, the assimilation of *-mn-* gives double *-mm-*, while in the plural the awkward *$*ḫamng-$* would either simplify to *$*ḫang-$* or become *$*ḫamang-$* by anaptyxis). Starting from the above paradigm with *e* in the strong stem and *a* in the weak, one cannot derive the attested forms where *a* is primarily in the strong

stem and *e/i* in the weak. The *a/e* ablaut points to original athematic *ḫi*-conjugation, as already indicated by *ḫamanki*.

The meaning 'bind' assigned to *ḫamank-* is also unsatisfactory. The Hittite verb for 'bind, tie' is *isḫy-* (= Akk. *rukkusu*), which is used with various objects and often an instrumental of the thing with which the tying is done. On the other hand, *ḫamank-* typically takes as its object *šuwil* 'thread', wool twine of various colors, or ᵁᶻᵁSA 'sinew', along with a dative-locative of the object or person to which these are attached. Thus *ḫamank-* does not mean 'bind' in the sense 'tie, attach', but rather 'intertwine, wrap around'. It is instructive that the Akkadian equivalent is *kuṣṣuru* which means 'knot together'. The real meaning of *ḫamank-* is also clear in figurative uses such as in the Prayer of Kantuz-zili (*KUB* XXX 10 Vs 20): *ḫuišwatar-ma-pa anda ḫingani ḫaminkan ḫin-gan-a-ma-pa anda ḫuišwanni-ya ḫaminkan* 'life is bound up with death, and death is bound up with life'. The idea is not that life is merely 'bound to' death, but that the two are inextricably bound up with each other. A complete survey of attestations is not possible here, but it is clear that *ḫamank-* means not 'attach', but 'intertwine, knot together' and more generally 'intermingle'.

Based on the preceding considerations of form and meaning, I suggest that *ḫamank-/ḫamink-* reflects a compound $*h_3e$-*mónk-ei*, $*h_3e$-*ménk-n̥ti* from the root $*menk$- 'mix, mingle' (Germ. *mengen*). The basic meaning of the preverb $*h_3e$- is to indicate bringing one object close to another: cf. Grk. *okéllō* 'drive (a ship) to land', Hitt. *ḫatk-* 'close' (with Sturtevant from *ḫa-* + *tg-* to $*teg$- 'cover'). Compare for the function Germ. *zu-* in *zu-machen* 'close' and *zu-mischen* 'admix, add (one ingredient) to (another)'.

By regular developments the preforms above would give the attested *ḫamanki, ḫaminkanzi*. The change of *e* to *i* before nasal in the plural produced a unique ablaut *a/i* which was subject to leveling in two directions. One solution was to generalize the strong stem (hence also weak *ḫamank-*). Since the weak stem was in *-ink-*, one could also create secondary *mi*-conjugation forms such as pret. 3rd sg. *ḫamikta* after the *li(n)k-* class.

## EXCURSUS XII

Oettinger, *Stammbild.* 145 with references, gives the correct etymology and preforms of *tamek-,* but certain details of the historical development require revision. As Oettinger's own examples show, the regular

result of *-mn-* is geminate *-mm-*. Therefore a singular *tṃ-né-k-ti* would give *tamʲnekti,* then *tammekzi* versus attested *tamekzi* (the spelling *dam-me-ek-* in Neo-Hittite is no evidence for double *-mm-,* since the mimation in signs *CVm* was non-existent by that time). As for the plural, the regular syllabification would be *tṃ-n-k-énti* > *tamnkanzi.* If this awkward cluster were simplified, we would be left with *tammekzi, tankanzi,* from which I see no way to derive attested *tamekzi, tamenkanzi.* Another possible solution to the cluster in *tamnkanzi* is anaptyxis, producing *tamankanzi.* From a paradigm *tammekzi, tamankanzi,* the attested forms may be derived by leveling of the single *-m-* of the weak stem but *e*-grade of the strong stem. For the former compare the leveling of the weak stem *-nn-* in nasal-infix verbs: **šunna-* 'fill' < **su-nh$_x$-(V)-* for strong **šuna-* < **su-ne-h$_x$-.* The spread of the *e*-vocalism to the plural must have been after the pre-Hittite change of *ĕ* to *i* before nasal plus consonant (contrast *ḫamink-* in 2.2.6.1 and Excursus XI) and may in fact be analogical after the *li(n)k-* or *ḫarni(n)k-* type: *likzi*: linkanzi: : *tamekzi*: x (→ *tamenkanzi*).


## EXCURSUS XIII

The spelling *mi-im-ma-me-iš-ša* (*KUB* VI 45 III 74; Mw) and the variant *me-em-ma-mi-iš-š[a]* must be read /mimmam(m)is/, based on the word's formation. Pace Eichner, *Sprache* 21 (1979) 165, this sequence cannot be read *MI-IM-MA me-iš-ta* (!) 'prospered in every respect'. Such a reading not only requires an emendation of *ŠA* to *TA,* but also supposes an entirely anomalous spelling *meišta* 'prospered' (with unparalleled use of *-za* with *māi-* 'prosper'), plus an unparalleled use of Akk. *mimma* for Hitt. *ḫūmandaz.* None of this is necessary. The sentence is a perfectly regular nominal sentence in the first person (marked in Neo-Hittite with *-za;* see note 8), with three coordinated participles in the nom. sg., the last regularly marked by geminating *-a* 'and': *IŠTU* ᵈU *pi-ḫaššašši-wa-za kanišš[(anza šalla)]nuwan[(za)] mimmamišš-a* 'I am (= have been) recognized, reared and –ed by the Storm–god *pihaš-šašši*'. The meaning of the last word is unknown, but the formation is clear: we have a Luvian participle in *-am(m)i-,* parallel to the Hittite participles in *-ant-.* The Luvian origin requires *i*-vocalism in both syllables: /mimmam(m)is/. Given the context, an ultimate etymological connection with Hitt. *māi-* 'prosper' is probable.

# Hittite Index

Nouns and verbs are listed below according to their (strong) stem form. For ease of reference I have generally retained the the forms of Friedrich, *HW* (including *ḫi*-verbs in final -*i*- as -*āi*-: *dāi*-, *pāi*-, *ḫuwāi*- etc.). In the case of pronouns, individual case forms and oblique stems are listed separately. A few selected endings are also included. The numbers refer to pages.

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# Neuerscheinungen ⎯⎯⎯⎯⎯⎯⎯⎯

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